ON THE GRILL
Patricia Morrison, Motorola's CIO, talks about her biggest management challenges and her favorite gadget. **PAGE 16**

NOW ENTERING REALITY
Municipal Wi-Fi projects are being slowed by technical challenges and other issues. **PAGE 9**

COMPUTERWORLD

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JUNE 18, 2007 • VOL. 41 • NO. 25 • $5/COPY

HIPAA Audit Riles Health IT

Medical industry on edge after feds examine hospital's security procedures

BY JAIKUMAR VIJAYAN

An audit of Atlanta's Piedmont Hospital that was quietly initiated by the U.S. Department of Health and Human Services in March is raising concerns in the health care industry about the prospect of further enforcement actions related to the federal HIPAA law's data security requirements.

The audit was the first of its kind since the Health Insurance Portability and Accountability Act's security rules went into effect in April 2005, supplementing data privacy mandates that were already in place.

Neither Piedmont nor HHS has commented about the audit, and few details have been disclosed publicly. But an HHS document obtained by *Computerworld* shows that Pied-

HIPAA Audit, page 98

INSIDE
A file-sharing app exposes the personal data of 17,000 Pfizer employees. Page 20

Symantec Unifies Controls

Some users wary of storage initiative

BY BRIAN FONSECA
LAS VEGAS

Symantec Corp. last week launched a plan to provide a single point of control for the company's breadth of data center storage management software — a goal that some users said can't be achieved.

"Whether or not [Symantec] can pull it off, that's a big nut to crack," said Steve Wilson, IT manager at Cincinnati Thermal Spray Inc. "I would be very skeptical that it could actually be done."

Wilson said he has "stuff everywhere" at CTS, with "different [technology] islands and pieces that don't work together. I think there's definitely the need for anything that can simplify and unify management of all these different resources."

Symantec, page 100

NEWSPAPER

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SPECIAL REPORT

IT workers at these 100 organizations are living the dream. They're joined to their employers' missions through technology and teamwork.

THE TOP 5

1. Quicken Loans Inc.
2. University of Miami
3. Sharp HealthCare
4. The Capital Group Cos.
5. The Mitre Corp.

And they're rewarded with prime pay and benefits. What's more, 64% of this year's top 100 expect to hire more IT workers this year.

Package begins on page 31.

Make a customized list of this year's Best Places to Work, based on what's most important to you. Sort by region, training budgets and more. www.computerworld.com/07/bestplaces

The Highly R

VOLUME 1 – ISSUE 3

Windows Server 2003

For all stories go to

NCsoft WON'T PLAY WITH LINUX, CHOOSES WINDOWS SERVER INSTEAD

Tom Nagy for The Highly Reliable Times

UP TO 400,000 GAMERS AROUND THE WORLD can connect to NCsoft's game service simultaneously.

Microsoft

eliable Times

www.microsoft.com/getthefacts

special edition

Reliability Is Essential for Online Game Company

By CHANG SUN PARK

SEOUL, Korea – NCsoft, an international online game company based in Korea, has an infrastructure that allows 400,000 users to connect to its game service simultaneously, with up to 10 million users per year all around the globe. To accommodate this load, NCsoft runs nearly 1,000 large-scale server farms capable of handling 40 terabytes of data. It is, in short, a massive system that cannot afford downtime.

That need for bulletproof reliability is why NCsoft chose Microsoft® Windows Server™, according to Kwak, Soon-wook, Director/Chief of Publishing Unit at NCsoft. "Before we implemented our server system, we directly compared Windows Server with Linux on a variety of different criteria. Windows Server 2003 provided not only reliability, which is our first priority, but also development productivity in a 64-bit environment, and cost-efficiency," said Kwak. "It was an easy choice to make."

Indeed, it was a choice that was critical to the continuing success of NCsoft, according to Corporate PR Team Leader Joo Young Kim. "The importance of online stability is paramount; in the case of games such as *Lineage* 2, our gaming contract with our customers states that an interruption lasting over four hours will result in consumer compensation. The Windows Server platform offers reliable service to hundreds of thousands of simultaneous online users, and therefore plays a crucial role in protecting the fantastic reputation that *Lineage* enjoys," said Kim.

For the full NCsoft story, plus other case studies and independent research findings on the reliability of Windows Server versus Linux, visit microsoft.com/getthefacts

DOWNTIME VERY UNPOPULAR: A recent

SPECIAL REPORT: Stunning discovery of secret to success

NCsoft's Kwak, Soon-wook (above) stated yesterday that Windows Server is the secret behind maintaining the reliability and performance of their system.

EXCLUSIVE INTERVIEW:

"Before we implemented our server system, we directly compared Windows Server with Linux on a variety of different criteria. Windows Server 2003 provided not only reliability, which is our first priority, but also development productivity in a 64-bit environment, and cost-efficiency. It was an easy choice to make."

— Kwak, Soon-wook, NCsoft Director/Chief of Publishing Unit

ARE YOU AVAILABLE? Reliability, dependability, and availability were found to be the favorite words of SysAdmins around the globe, according to a new research study published

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12 As proposed e-voting legislation that would add safeguards languishes in Congress, criticism of the bill is mounting among legislators and experts.

12 Online marketplaces that offer eBay-like services for matching companies with freelance developers are attracting IT managers who want flexible workforces — and lower labor costs.

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20 Unauthorized file-sharing software on a Pfizer employee's laptop exposes the personal data of about 17,000 current and former workers at the drug maker.

22 Global Dispatches: The head of the U.K.'s National Programme for IT acknowledges mistakes but says the program should continue; and digital fingerprints will be added to German passports in November.

24 Users of IBM's Informix Dynamic Server database hope that the upcoming Cheetah release will get the same kind of marketing push as the vendor's flagship DB2 software.

98 Q&A: Microsoft IT manager Devin Murray says the software vendor is trying to boost internal server utilization rates so it can stop paying for unused processing power.

SPECIAL REPORT

100 BEST PLACES TO WORK IN IT 2007

14th Annual Report

A sense of commitment, and connection, keeps IT employees at these top companies jazzed up about work.

Package begins on page 31.

QUICKEN LOANS Page 34

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SHARP HEALTHCARE Page 38

44 See the full list of the 100 Best Places, with information about training, staff turnover and promotions. Plus, view the company rankings by size, and check out statistics from the survey of 27,038 IT workers at the 100 employers.

PRIZED EMPLOYEES. The top employers try hard to keep their workers happy. And for five IT staffers at some of this year's Best Places, it's working.

72 Different backgrounds and ideas energize IT employees like Cathy Sels (left) at Fairfax County Public Schools, one of the top-rated Best Places for diversity among its IT employees.

74 Overseas travel and flexible hours are just a few of the perks enjoyed by IT employees like Russ Cary (right) at SAS Institute, one of the top-rated Best Places for benefits.

76 With expanding opportunities to grow their skills, workers like Mark Panning (left) are happy to stick around at Creighton University, one of the top-rated organizations for IT worker retention.

78 Mentoring programs, tuition reimbursement and quality training made Corning Inc. a top-rated Best Place for IT career development, as Jill Baker attests.

80 A wealth of on-the-job and classroom education put Commonwealth Financial Network at the top of the Best Places list for training, and Keri Donahue reaped the benefits.

86 If You Worked Here, You'd Be Happy Now. Whether it's generous vacation time or low-cost health care, these Best Places have the benefits you want.

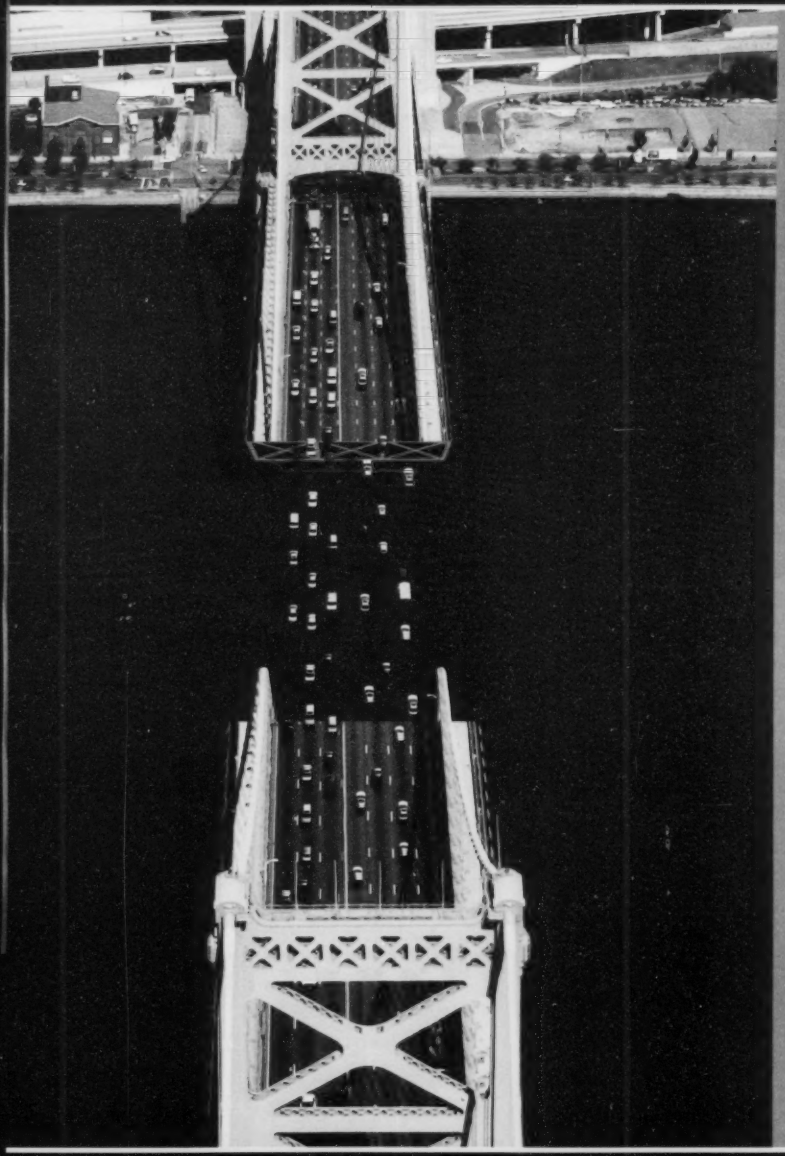
88 Opinion: Get Image-Conscious. Robert Half Technology's Katherine Spencer Lee tells businesses how to become "employers of choice."

WWW.COMPUTERWORLD.COM/07/BESTPLACES

MAKE A CUSTOMIZED LIST of this year's Best Places. Sort by region, training budgets and more.

NOT EVERYONE LANDS AT ONE OF THE BEST PLACES. We want to hear why your company would never, ever make our list.

HOW TO EXPECT THE UNEXPECTED



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28 **Don Tennant** isn't surprised that the percentage of female IT employees working at the companies in this year's list of Best Places to Work in IT is considerably higher than the industry average.

102 **Frankly Speaking: Frank Hayes** looks over *Computerworld*'s Best Places to Work in IT survey and is impressed by what truly matters to the respondents.

29 **Sneak Preview:** Get a look at the design and format changes coming to *Computerworld* next month.

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COMPUTERWORLD.COM THIS WEEK

MEMORY LANE

It's not often that we spend an hourlong meeting in nonstop laughter. But that's what happened when we were going through old print editions recently, preparing for our 40th anniversary issue next month. The original idea of pulling those issues out of storage was to look at important stories and people throughout the years. But we couldn't get over some of those ads!

"80 Mbytes of storage for less than $12,000!" boasts one. In another, a woman in hot pants touts a modem that's, yes, "maybe even sexy." We even found Elvira, Mistress of the Dark, hawking software.

The staff had so much fun, we decided to share. Head online to see a collection of 10 we found the most entertaining, along with some top headlines from the dates they ran.

www.computerworld.com/hardware

SHARK BAIT BETA

Need a place to vent about IT? Have a story to share? Submit your own "baits" for points, and rate other baits. Leave comments, build your profile, or try to become one of the big fish. Get started at http://sharkbait.computerworld.com.

Meeting Expectations

100 hours a week? No problem. While keeping a smile on your face? Sure, why not? It still may not be enough to earn you a good review, though. . . .

http://sharkbait.computerworld.com/?q=node/1142

Mac vs. PC Cost Analysis: How Does It All Add Up?

HARDWARE: Everybody knows PCs are cheaper than Macs, right? Wrong! (At least sometimes.)

www.computerworld.com/hardware

How a Tiny Start-up Attracted Big-Company Talent

MANAGEMENT: A video game maker created a wish list of its ideal job candidates and set up a campaign to woo each one. A personalized iPod helped grab their attention.

www.computerworld.com/itmanagement

Tools That Manage PCs And Macs at the Same Time

SERVERS: Ryan Faas takes a look at tools that handle systems management tasks for Mac and Windows clients and servers. He gives his take on each tool's strengths and weaknesses.

www.computerworld.com/servers

Can Microsoft's Expression Studio Challenge Adobe?

SOFTWARE: Microsoft makes a foray into the design suite market with this bundle of four applications. How do they stack up, individually and together — and should Adobe be worried?

www.computerworld.com/software

Slim Is in for Windows Desktop Firewalls

SECURITY: You don't need a bloated security suite to get the best protection from a firewall. In fact, many of the biggest names offer less protection than simpler, lesser-known firewalls.

www.computerworld.com/security

Data Governance Will Eclipse CIO Role

MANAGEMENT: Jay Cline thinks companies that don't centralize data governance now could face extinction in a few short years. And out of the ashes of what could be a cataclysm for U.S. business will arise a new title: chief information strategist.

www.computerworld.com/itmanagement

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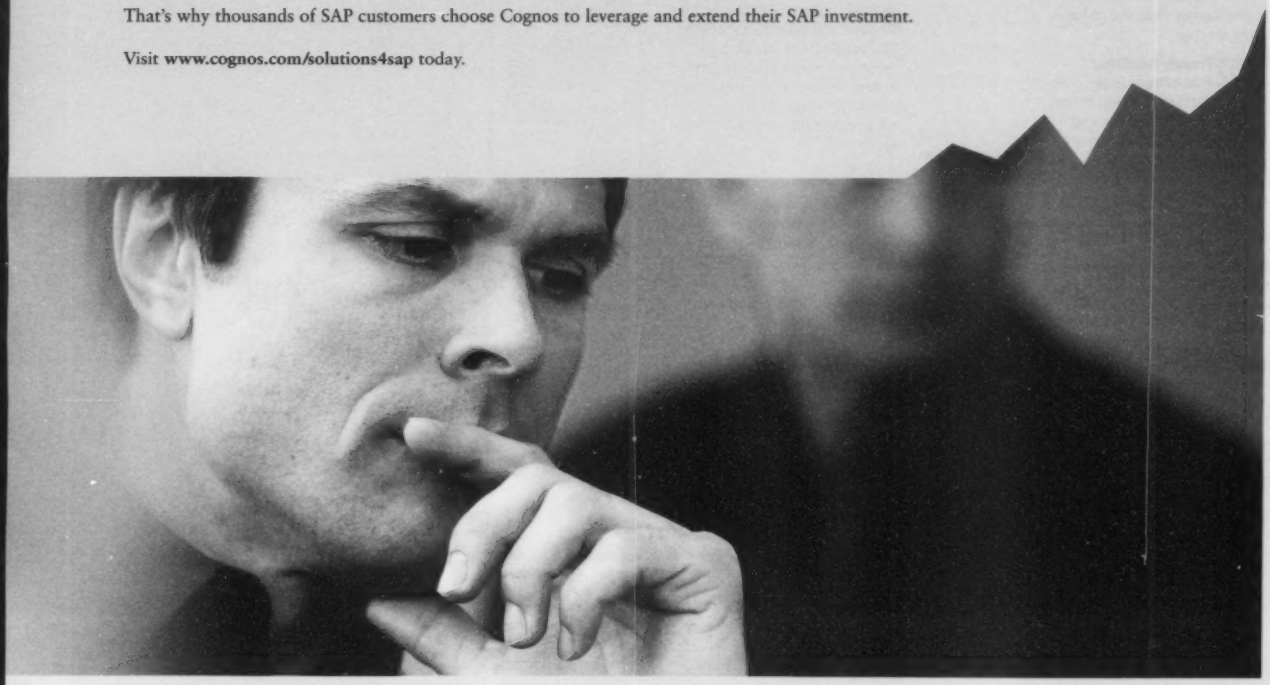

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AT DEADLINE

Palm Layoff Targets Development Staff

Palm Inc. has laid off "a small percentage" of its 1,200 employees, mostly from its development group, a spokesman confirmed. The spokesman said that the reorganization was in the works prior to the sale of a 25% stake in the firm to private equity investor Elevation Partners LP for $325 million earlier this month. He declined to say how many employees had been laid off.

Microsoft Signs Pact With Linux Vendor

Linspire Inc. has signed an intellectual-property agreement with Microsoft Corp. that shields the Linux company's customers from patent claims. Microsoft has argued that Linux and related open-source applications violate 235 of its patents, prompting Linux vendors Novell Inc. and Xandros Inc. to sign earlier pacts. Financial terms of the Linspire deal were not disclosed.

Ranieri Steps Down As CA Chairman

William McCracken has been named to succeed Lewis Ranieri as chairman of CA Inc. Ranieri will remain a director of CA. The firm said he is stepping down as chairman after three years because the company's legal problems, which led to fines and jail terms for former executives, have been largely put behind it. McCracken, a retired IBM executive, joined CA's board in 2006.

Novell Set to Ship Linux Server Suite

Novell plans to release its first Linux-based desktop-and-server suite for small businesses in September. The offering targets rival and sometime partner Microsoft. The Novell Open Workgroup Suite Small Business Edition is based on Novell's SUSE Linux distribution and includes the company's Open Enterprise Server for storage. Novell said one license for the suite will support five servers and 200 users.

Reality Catches Up to Municipal Wi-Fi Hype

Wireless networks tax cities because of technical concerns, other issues

BY MATT HAMBLEN
NEWTON, MASS.

Municipal Wi-Fi networks, which have been heavily hyped over the past two years, are now running into a wall of reality in the U.S. because of a combination of economic, political and technical issues.

That was the message conveyed by city administrators, Wi-Fi proponents and even some vendors of wireless technology at a municipal Wi-Fi conference here this month.

"Everything with muni Wi-Fi last year was very theoretical," said Esme Vos, one of the founders of MuniWireless LLC, which organized the conference. "But when you get around to setting it up in your hometown, administrators hit reality and say, 'It is not as easy as I thought it would be.' "

On its Web site, MuniWireless lists 385 cities and counties in the U.S. that are planning, deploying or already running Wi-Fi networks. The count increases to 424 if the municipalities that are seriously considering Wi-Fi projects are included.

But Vos, a self-styled evangelist for municipal Wi-Fi, said at the conference that none of the major U.S. cities with big Wi-Fi plans have fully deployed their networks. She added that some municipal IT managers in hilly communities are encountering coverage problems that require them to install many more Wi-Fi access points than planned.

End-User Considerations

Even officials at Microsoft Corp. have been doing some soul-searching about municipal Wi-Fi's future. "We're finding that there are real end-user problems," said Stefan Weitz, director of planning at the software vendor's MSN unit. For example, indoor coverage is often poor, he said.

Weitz warned that applications such as instant messaging and voice over IP "are going to crush these networks unless properly managed."

> **There's no packaged product out there for how to build a Wi-Fi system. We had to invent it.**
>
> MICHAEL MERRILL, SELECTMAN, BROOKLINE, MASS.

On the plus side, Weitz said recent market studies done by Microsoft in Portland, Ore., and other locations showed that the Wi-Fi technology has "widespread adoption potential" among end users.

But the business model for municipal Wi-Fi "is still very much up in the air," he added. "Consumers are interested but unforgiving, and if it doesn't work, they're done."

Teresa Martin, executive director of the Cape Cod Technology Council in Barnstable, Mass., said a desire to increase economic development has outweighed potential problems with a Wi-Fi network that connects towns on Cape Cod.

"You cannot do any economic development in this century without electronic connectivity," she said. "It's the same as roads were in the last century."

Some municipal officials whose cities are launching Wi-Fi projects said they remain buoyant about the prospects for success. They added that they see political and economic concerns as being more important than possible technology roadblocks, although that's partly because their projects are still in the early stages.

But Michael Merrill, a selectman in Brookline, Mass., noted that creating a Wi-Fi network isn't easy for a town like his. "There's no packaged product out there for how to build a Wi-Fi system," he said. "We had to invent it."

And Carl Nerup, a vice president of business development at AT&T Inc., warned that municipal Wi-Fi can be an expensive venture. The annual cost of managing Wi-Fi access points and related technology is about $40,000 per square mile, Nerup said. He added that AT&T has seen costs go much higher when tall buildings or hills necessitate additional access points.

"All of these programs cost money," Nerup said. "Bring your Platinum card."

Red Sox IT Chief Looks to Shut Out Wi-Fi Interference

NEWTON, MASS.
WITH THE CITY OF BOSTON planning a municipal Wi-Fi network, Steven Conley, IT director for the Boston Red Sox baseball team, is bracing himself for possible interference with fabled Fenway Park's own Wi-Fi hot spot.

"Frankly, I don't want these municipal wireless systems to happen. I'd rather they all just go away," Conley said during a session at the MuniWireless 2007: New England conference here last week.

Conley added that he was speaking in jest – somewhat.

"I know it has to happen, but I don't want it," he said, referring to the planned development of the Boston Wi-Fi network, as well as a separate one in neighboring Brookline. Fenway Park, the home of the Red Sox, is located in a neighborhood near the border of Boston and Brookline.

The Red Sox first installed Wi-Fi technology in Fenway's main press box in 2003. Since then, the team has added a separate Wi-Fi network for its own workers, plus another network to support wireless ticket-scanning as well as in-seat ordering of food and drinks in some sections of the ballpark.

Conley described some incidents of Wi-Fi interference he has already had to deal with. For example, last winter's signing of Japanese pitcher Daisuke Matsuzaka has attracted an onslaught of media coverage on the days he is scheduled to pitch, sometimes resulting in as many as 25 television news trucks being parked near Fenway. The trucks send microwave signals to antennas on the roofs of four nearby high-rise buildings in order to transmit video.

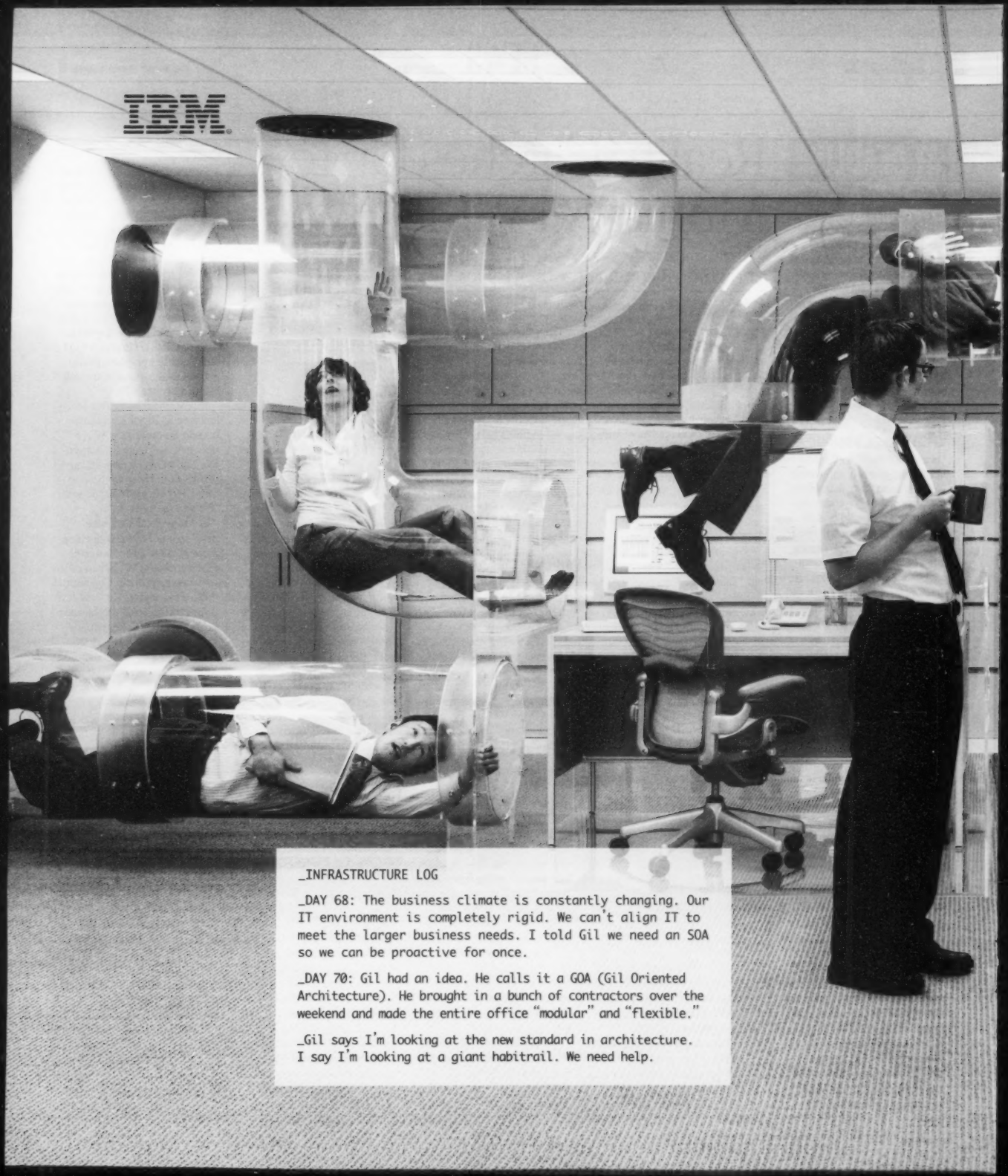
But Conley said the microwave signals use the same spectrum as Wi-Fi transmissions. And at times, signals sent from the trucks bounce back off of buildings or metal objects, he said. That has wiped out Wi-Fi coverage in the press box as well as the Wi-Fi-based TV remote controls used by the team's owners in their suites at the park.

Diagnosing the microwave interference problems wasn't easy, according to Conley. "The only way we figured it out was with a spectrum analyzer," he said. So far, the microwave transmissions continue to get top priority over Wi-Fi, but Conley said that he at least now understands what's going on.

Another problem cropped up in the spring after the Red Sox installed a new family seating area consisting of metal bleachers on the right-field roof. Because of the metal, "we found the wireless signal shot into right field," Conley said.

Problems like that are inevitable with Wi-Fi, he added. "I don't want to sound like Chicken Little, but things can happen," he said. "There's just going to be stuff that's weird."

– MATT HAMBLEN



_INFRASTRUCTURE LOG

_DAY 68: The business climate is constantly changing. Our IT environment is completely rigid. We can't align IT to meet the larger business needs. I told Gil we need an SOA so we can be proactive for once.

_DAY 70: Gil had an idea. He calls it a GOA (Gil Oriented Architecture). He brought in a bunch of contractors over the weekend and made the entire office "modular" and "flexible."

_Gil says I'm looking at the new standard in architecture. I say I'm looking at a giant habitrail. We need help.

Criticism Grows as House E-vote Debate Is Delayed

Co-sponsor Kucinich retracts support for bill that mandates paper trail

BY MARC L. SONGINI

CRITICISM OF proposed legislation requiring that all touch-screen voting machines provide a paper trail is mounting as the bill's wait for a congressional vote drags on.

The Voter Confidence and Increased Accessibility Act, which addresses security and reliability flaws in electronic voting machines, has even lost the support of a co-sponsor, presidential hopeful Rep. Dennis Kucinich (D-Ohio).

In a statement last week, Kucinich described the legislation as "a voter reform bill rapidly losing support." He said he plans to introduce a separate bill that would require that all ballots in presidential elections be counted by hand.

A spokeswoman for Kucinich declined to provide more details about the reasons for his opposition to the bill.

The bill was approved by the U.S. House Administration Committee in May.

A spokesman for the bill's primary sponsor, Rep. Rush Holt (D-N.J.), blamed the debate delay on other congressional priorities, such as supplemental funding for the Iraq war and debate on stem cell research legislation.

He wouldn't predict when debate on the e-voting bill would commence.

The Holt spokesman added that he doesn't anticipate that Kucinich's change of heart will lead to further defections by supporters.

> **"It's a compromise, that's true, and it's upsetting purists on both sides, but that tells you it's doing what it's supposed to do."**
>
> ION SANCHO, ELECTIONS SUPERVISOR, LEON COUNTY, FLA.

But as the bill has languished, criticism from voter advocacy groups and analysts has risen. Some critics contend that the proposed legislation should ban touch-screen systems outright. Others say it protects e-voting machine vendors at the expense of the public.

"The biggest concern is the fact that it continues to allow the use of DREs," or direct-recording electronic touch-screen machines, said Brad Friedman, a political blogger and voter activist based in Los Angeles.

"In my opinion, the danger is that it will institutionalize DREs and put some sort of federal blessing on them," he said. "It will serve to give a false sense of security to the voter."

And it is not a transparent system, Friedman claims. "It's a grave danger. I'd be willing to accept a less-than-perfect bill as long as it gets DREs out." He noted that Florida recently passed legislation banning DREs. His preference is for the use of paper-based machines, such as optical-scan systems.

Holt's spokesman emphasized that the bill's intention isn't about selecting a single e-voting technology.

"It is agnostic on equipment choice, as long as the voting system meets the principles of verifiability and auditability," the spokesman said.

Ion Sancho, the elections supervisor for Leon County, Fla., said he supports the bill despite fears that it provides too much protection to vendors of e-voting machines.

According to Friedman, the bill would allow only experts to review the source code of machines and forbid them from sharing any information about investigations unless "egregious flaws" were discovered.

"It's a compromise, that's true, and it's upsetting purists on both sides, but that tells you it's doing what it's supposed to do," Sancho said.

Larry Norden, staff counsel at the Brennan Center for Justice at the New York University School of Law, said that he also supports the bill despite its flaws. He noted that election districts could face time and financial crunches in attempting to meet the bill's criteria.

Nevertheless, Norden said, the bill does address a number of DRE security flaws and is worthy of passage — sooner rather than later. ▸

Online IT Job Marketplaces Give Smaller Firms More Options

Web sites list contract programmers, technicians in U.S. and other countries

BY PATRICK THIBODEAU

An increasing number of small and midsize businesses are turning to eBay-like IT services brokers to hire technical talent — both within the U.S. and offshore — for projects.

That was the direction in which Giancarlo Fiorarancio took Betsey Johnson Inc., a New York-based chain of women's designer clothing stores with nearly 50 outlets, after he was hired as its IT director about nine months ago.

Previously, Betsey Johnson's store managers would contract with local IT services firms for upgrades and repairs of desktop systems and their networks. But that approach was costly, and the abilities of the technical help varied, Fiorarancio said. So now he relies on New York-based OnForce Inc., which acts as a middleman between corporate users and freelance technical talent.

Fiorarancio said that through OnForce's Web site, he can prescreen available IT help by geographic area, review the skills of prospective contract workers and see how they were rated by other customers. He can also offer different pay rates based on the job at hand.

The new approach has cut Betsey Johnson's remote support costs in half, he said. And through repeated use of some freelance technicians, the company is essentially developing its own remote IT workforce. "I view them as an on-site extension of our IT department," Fiorarancio said.

The job marketplaces may have their biggest impact in connecting IT managers with offshore help. While Congress debates whether it should raise the annual cap on H-1B visas, global job-matching services such as one offered by Menlo Park, Calif.-based oDesk Corp. are enabling companies of any size to find offshore programmers.

Without that access to offshore help, Aaron Smith wouldn't be in the position he is now. Along with his wife, Smith operates Chiron Data Systems Inc., a developer of diabetes management software in Corinth, Texas. He has been using oDesk's online service to find development help, and he said he works most closely with a programmer in Russia who is paid $15 per hour.

According to Smith, a U.S.-based programmer doing similar work would expect an hourly rate of $60 to $120. "Outsourcing gives us a chance to compete," he said.

A year ago, oDesk had a roster of about 5,000 available service providers and a list of advertised jobs that numbered in the hundreds. Last month, it listed 1,153 jobs and a total of about 13,000 service providers, said CEO Gary Swart.

Pay rates vary by skill as well as geographic location,

Earning Potential

oDesk (all rates per hour)

Net developer
$15 average, $67 maximum

Java developer
$16 average, $100 maximum

OnForce

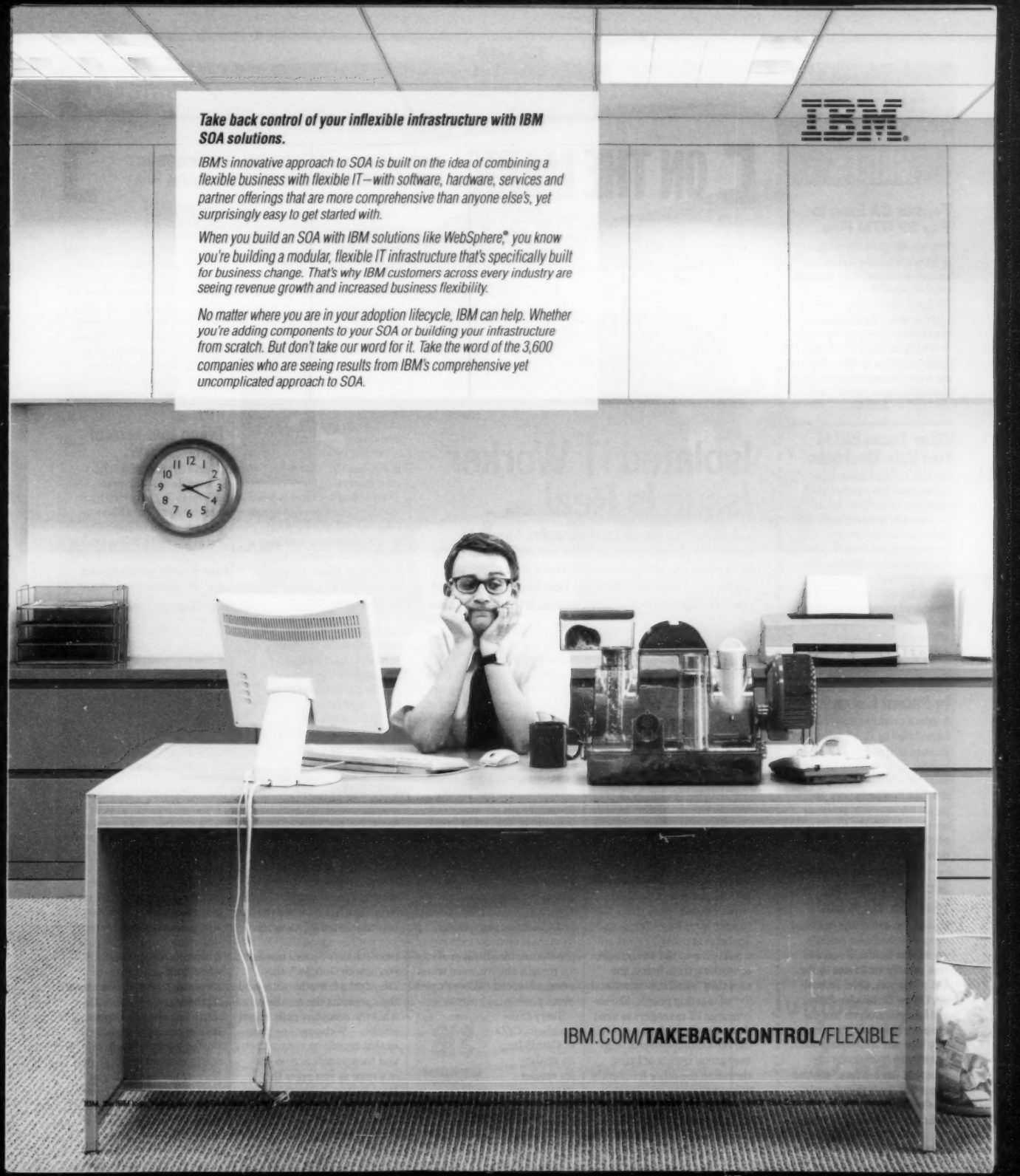
Repair Windows NT server
One-hour job: $60

Install two PCs
Two-hour job: $70

the type of project involved and recommendations from earlier customers. Development work can be monitored and evaluated on an ongoing basis through a central project management repository. In addition, oDesk provides screenshots of a programmer's work so IT managers can do spot checks of code.

As with eBay Inc.'s online auction site, recommendations from customers help service providers on both the oDesk and OnForce sites establish successful track records, which can help them earn higher fees. To achieve that, they have to deliver more than good technical services, said Shane Bell, whose company, IT services provider ITechWest Solutions Inc., takes on assignments via OnForce.

"Ninety percent of it is relationship and that willingness to go the extra mile," said Bell, who projects that Midland, Texas-based ITechWest will gross about $1 million in revenue next year. ▸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BRIEFS

Former CA Exec to Pay $2.97M Fine

Stephen Richards, former head of CA Inc.'s worldwide sales operation, was ordered by a federal court to pay $29.7 million in restitution to stockholders for his part in a major fraud scheme at the software company. Richards is already serving a seven-year prison sentence for his part in the fraud. He had agreed to pay the restitution in papers filed in the court on June 12.

Ciber Loses Bid to Test Vote Machines

The U.S. Election Assistance Commission has rejected an application from Ciber Inc. to be a security test laboratory for electronic voting machines. The commission said it voted to terminate Ciber's application after the company failed to notify the EAC of key staff changes, which is required to become an accredited e-voting test lab. Ciber can still be accredited under different programs.

Microsoft Cleared In Patent Lawsuit

A federal court has dismissed a lawsuit filed by Timeline Inc. that accused Microsoft Corp. of infringing on its patents. The case dates back to 2005, when Timeline sued ProClarity Corp. for patent infringement. Microsoft later acquired ProClarity. In a press release, Timeline said that it may appeal the ruling.

McAfee Planning Tools for High End

McAfee Inc. executives disclosed plans to deliver more scalable versions of McAfee e-mail and Web security appliances by the end of this year. Chief Technology Officer Christopher Bolin told financial analysts that the company has begun "building a very high-end enterprise product, [creating] a blade server approach to this problem." McAfee hopes that the high-end products will dramatically boost its potential customer base, he said.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Isolated IT Worker Issue Is Real . . .

. . . and needs a human touch to resolve. More and more of your tech staffers work remotely, potentially becoming isolated from co-workers, managers and customers. Such isolation can hurt productivity, says Nina Buik, president of Encompass, a 16,000-member Hewlett-Packard user group. When people are "forced to figure out things on their own, it may take longer," Buik says. She calls it a "real issue" that managers should be attuned to. Buik is also chairman of HP's local user group (LUG) in Atlanta, and she works from home herself, for MindIQ Corp. She speculates that half the people who show up at LUG gatherings do so to "make a connection, shake a hand or get a hug." While she doubts that many IT workers would give up the advantages of working from home, she says they "need the occasional fix" of meeting people. She encourages IT managers to send their remote workers — even the reluctant introverts — to user group events or bring them into the office frequently. "Like any online relationship, you've got to meet somebody at some point," Buik says.

BUIK: Remote workers need human contact.

Simplifying CEP . . .

. . . may be the final frontier of business analytics. But like any frontier, much of its promise lies in the distance, says Brian Farrar, managing director at Innovation Advisors Inc., a midmarket investment bank in Waltham, Mass. He acknowledges that "nuts and bolts" analytics problems, such as budget and pricing management, are under control, and he sees some breakthroughs in financial services, Web site management and government intelligence. But for the fleet of enterprises trying to navigate the vast expanses of data they create and collect on everything from their customers to supply chains, insightful analytics remain elusive, even when using advanced CEP (complex event processing) software.

Terry Cunningham, CEO of Coral8 Inc., an analytics vendor in Mountain View, Calif., doesn't necessarily disagree. But he stresses that CEP is only in its first phase and that its development "is moving quicker than originally thought." He points to improved pattern-matching techniques that are detecting fraud online, and the marrying of CEP to RFID, which is gleaning more accurate and useful information in the health care market.

$1B
CEP market by 2010, says Aite Group.

CEP analytics market is developing slowly, says FARRAR.

"Financial services is just the tip of the iceberg," agrees John Partridge, vice president for industry solutions at StreamBase Systems Inc. in Lexington, Mass. He claims that real-time applications — the raison d'être of CEP — "is a bigger category than commercial applications."

Both Coral8 and StreamBase are unveiling the 5.0 versions of their respective CEP tools this week. While the two products differ in details, both companies are stressing programmer ease of use in the upgrades. And neither charges for developer versions; you pay only when your CEP application is deployed.

Get the Web in 3-D . . .

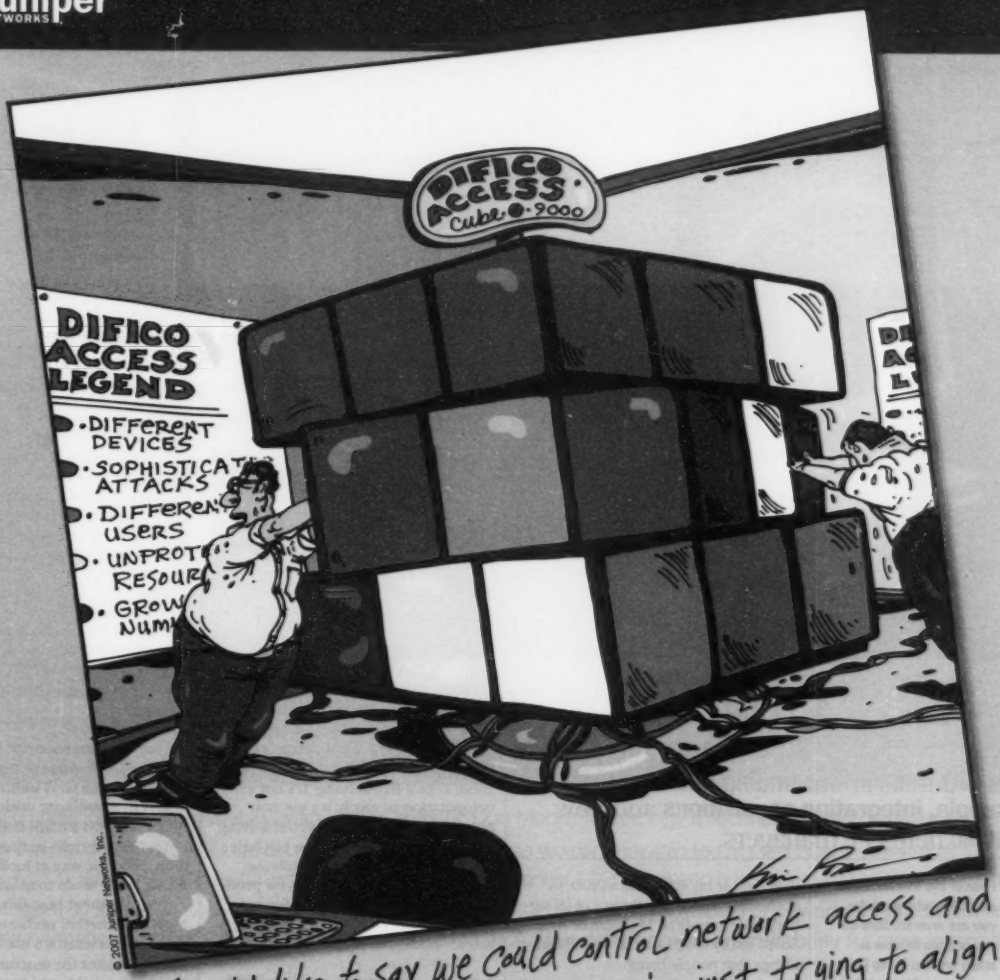
. . . and see what you've been missing. SpaceTime 3D Inc. in New York has released the beta version of its namesake 3-D Web browser. CEO Eddie Bakhash says SpaceTime lets you search Google, Yahoo, eBay and a few other sites and then presents the results in what the company calls visual stacks — Web pages or images that recede on your screen and then parade across one at a time as you press the Next button. Bakhash claims that many more sites will be available in 3-D when the software is ready this fall. He says SpaceTime will save you time because it will be more obvious that you've found the right page when you see an image of it and not just a list. Currently, SpaceTime works with Windows XP and Vista, but Bakhash expects a Mac version in January. Take a peek at *www.spacetime.com*, or download the software for free.

Dump your bank of batteries and . . .

. . . get a flywheel UPS. The downside of a universal power supply is its battery bank. According to Pana Shenoy, vice president of engineering at Vycon in Yorba Linda, Calif., you never really know how reliable your batteries are. He claims that a single bad battery cell can sabotage a smooth handoff to your diesel generator. But a mechanical flywheel, which can store up to 25 seconds' worth of electricity, has enough power to keep your data center operational until your fast-start generator kicks in. Shenoy also points out that batteries last about three to five years, whereas a mechanical flywheel unit can last up to 20 years. And you won't have all those environmentally nasty batteries to dispose of. It's not cheap, though. Pricing for Vycon's flywheel UPS starts at about $50,000. But, Shenoy points out, if you've ever had a dead data center because of a dead battery, it'll seem like a bargain.

Vycon's flywheel UPS replaces battery banks.

Juniper NETWORKS



"Sir, I'd like to say we could control network access and make it secure, but right now we're just trying to align all the greens so users can get their email."

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ANDY ROTHMAN

Patricia Morrison

Motorola's CIO talks about **finding and keeping talented people, integrating acquisitions** and how **making music** helps IT managers.

THE GRILL

Four of the five business unit CIOs who work for you are women. How do you happen to have so many women in top IT positions at Motorola? In a couple of cases, they were promoted, and in others, they were hired from the outside. When you have an opening, you make sure you have a diversity of candidates, in gender, experience and other ways.

Given all the concerns in the industry about attracting women to IT, would you personally choose a woman for a job if all other variables were roughly equal? I don't think that way. It's valuable to have diversity in my team — not so much to have a woman. I consider what will make my team better. That can include personality. One of my CIOs brings consumer products experience into my team. One had supply chain experience and brought an engineering perspective. One of my CIOs has a Ph.D. in art history and was a curator at [New York's Metropolitan Museum of Art]. So it's really looking at all the unique things that people bring.

How can companies attract young women to a career in IT? It's not unique to women, but it's a problem, if you are talking about getting kids into the IT profession from an educational standpoint. There's a lot in the media about outsourcing, and that gives misimpressions about the IT opportunity. That's one dynamic that's making people gravitate away from IT as a profession.

I recently had lunch with a group of female engineering students and asked what interested them in the engineering profession. It was a consistent view that the No. 1 thing to motivate them was their fathers. So there's got to be a feeling of confidence when you come into a difficult profession, whether it is engineering or IT. That confidence is very important.

You mean their fathers instilled in them a sense of confidence? Yes, because IT is hard — not that business isn't hard or nursing isn't hard. Confidence is a leadership quality. What the profession is about is problem-solving. It's not about computation so much; it's not only about programming, but about solving problems. Some of them are big, hairy business problems you are solving. Some are usability problems for products. There's a lot of art and finesse that we don't talk about when we try to attract women to the profession.

Is IT worker retention a concern for you? We talk about retaining people every month in my operating reviews in China and India. In those regions, there's a lot of job-shopping going on, so much that it reminds me of the heyday of the IT bubble, where people changed jobs every two months. For our growth and what we're doing at Motorola in those regions, we need leaders on the ground and in IT. We need to support the growth of R&D, and we need to be where the work is. It's very important, but it's hard to retain them.

Any ideas on how to deal with that? We don't really know yet. It's an emerging trend. We know that what motivates IT people is, "Does my customer really appreciate my work?" But how did we get to the point where we train a person and suddenly they go down the street for 20% to 30% increases in pay? It's the nature of the markets there right now.

You have a strong education background in music and math. What do those have to do with preparation for IT work? Music programs in schools are critical. I studied music and was a math major in college. I'm actually a right-brained person with a holistic way of looking at things. Music study tends to make you think differently about how things work together, whether orchestra, choral or theater. You learn it's not the individual that makes the outcome, but it's all the things working in harmony. That's like running a project in IT or business.

How is IT at Motorola influencing the development of the company's products? Innovation comes from solving real customer problems. We use our own products, and we have a pretty significant impact on product development. Almost 6,000 Motorola Q handhelds have been adopted in our IT [operations] because it is an enterprise device with 23 apps running on it.

What handheld device do you use? I use a 3G Q , announced recently. I use it for e-mail and voice and for everything. As a matter of fact, I rely less and less on my laptop. I would take a laptop if I

Continued on page 18

Dossier

Name: Patricia Morrison

Title: Executive vice president and CIO

Organization: Motorola Inc.

Location: Schaumburg, Ill.

Something people don't know about her: Sang in a rock band called Kaleidoscope.

Favorite nonwork pastime: Loves to cook; hates to bake.

Favorite vice: Saturday afternoon naps.

Favorite movie: *The Godfather*

Favorite book of all time: *Marley and Me: Life and Love With the World's Worst Dog*, by John Grogan. "I read it again all the time. It's a great book about a dog – a Lab. It's a wonderful story of the cycle of life."

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Execs Outline Hurdles to Offshore Work

Retaining skilled developers, limiting risk and project costs are vital factors

BY HEATHER HAVENSTEIN
ORLANDO

COMPANIES LOOKING to shift development work to offshore service providers must take steps to ensure that those firms employ skilled workers — and are able to retain them, according to a panel of IT executives at the IBM Rational Software Development Conference 2007 here last week.

Nanette Brown, director of architecture and quality management at Pitney Bowes Inc., said the company's offshore outsourcing partners have difficulty retaining top developers, who often opt to take on project management roles after a few years of writing code.

To combat that problem, Brown said, the Stamford, Conn.-based, manufacturer of mail and postage equipment is working with offshore partners to forge career paths that will encourage core developers to stay put.

Cisco Systems Inc. has struggled with the attrition of workers at companies in India, Israel and China that it has hired to develop software, said Jan Roberts, senior director of Cisco's central engineering tools and services group.

Cisco first used offshore service providers to supplement the work of teams in the U.S., but it found that the attrition rate was "terrible," she said,

To address the problem, Cisco started sending more-important projects overseas, so developers at outsourcers wouldn't "feel like we are giving them work we don't want to do," she said. Since then, the attrition rate has gone down significantly, Roberts said.

The networking equipment vendor has since turned its attention to ensuring that its intellectual property is protected when projects are sent to Chinese outsourcing partners, Roberts said. Cisco is working to create an automated process of separating key pieces to ensure that sensitive intellectual property is not sent overseas, she explained.

> **You always want to make sure you use [metrics] in a functional, not a dysfunctional, fashion.**
>
> NANETTE BROWN, DIRECTOR OF ARCHITECTURE AND QUALITY MANAGEMENT, PITNEY BOWES INC.

Accurate Metrics Are Key

The panelists agreed that metrics should be devised to measure the performance of overseas workers, though Brown noted that managers must tread carefully when interpreting the measurements.

At Pitney Bowes, for example, the rate at which U.S. developers reject bug submissions from foreign testers is twice the rate at which they reject submissions from U.S. testers, she said.

IT managers worked deliberately to interpret those results and were careful not to assume that domestic developers were discounting bugs or that offshore workers were mistaking valid operations for bugs, Brown said.

"You always want to make sure you use [metrics] in a functional, not a dysfunctional, fashion," she said.

Most of the panelists agreed that cost is a primary reason for sending projects offshore.

Cisco's Roberts acknowledged that the company likely would cut back on offshore development if the costs were the same as in the U.S.

Brown also said her company would probably send less work overseas if the labor costs were equal.

However, she noted that if labor costs get close, offshore firms might try to win business by offering sought-after skills. "People would be competing to try to develop areas of expertise that you would want," Brown said. "That would be exciting."

Daniel Sabbah, general manager of IBM's Rational unit, said Rational will continue to send development work overseas even if costs reach North American levels, because offshoring helps IBM learn about potential new markets for its own products.

Dave Lubanko, principal consultant at Rational, noted that many companies struggle to decide whether to send new projects or mature projects to overseas developers. New projects can be harder to manage, but sending mature software for updates could adversely affect quality, he said.

Sabbah said that the company's policy is to initially send projects to outsourcers at the back end of the life cycle and then slowly — over a period of three to five years — send them projects that require a deeper understanding of the life cycle.

"[Overseas workers] start out having to understand the products themselves without being overstressed in trying to innovate at the same time," he said. "You want a sense of ownership."

Continued from page 16

were doing a big Word document or a spreadsheet, but I'm not a big spreadsheet junkie. I have to tell you, I don't see a lot of need to have a laptop. I travel about 60% of the time all over the world. [The handheld] works in all the networks around the world, but not Japan, which is unique. But I can get applications on the Q and can deploy to the Q anything I can move through our mobile portals. I can do approvals for workflow and see my reports. I can do a NetMeeting live on a Q. The BlackBerry is a fabulous e-mail device, but there's a lot I can't do on it.

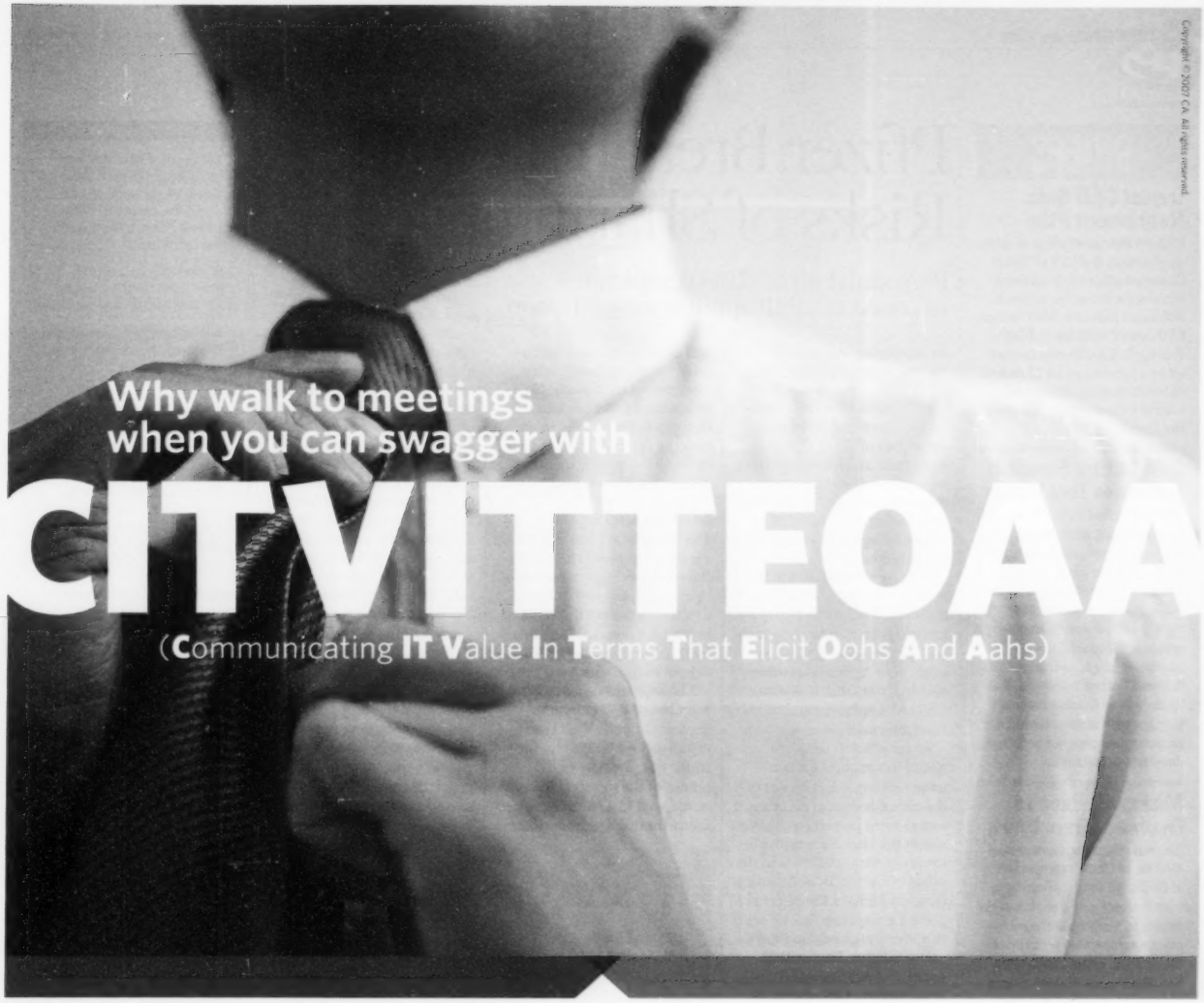
How is the integration work going following the recent acquisitions of Good Technology and Symbol Technologies? I'm intimately involved with that. We've started to create a repeatable process for integrating companies. For example, with Symbol, you do basic things right away, like HR integration and setting up e-mail and Internet. For things like product portfolio integration and order-taking integration, we've started using business process management tools to create dialogue around where the processes of the two companies intersect and how to create revenue synergy. That has gone really well. BPM has been very helpful. We've also learned it doesn't pay to just rip out one of the ERP systems of the two companies being merged. We use parts of both ERP systems.

> **There's a lot of art and finesse [in IT] that we don't talk about when we try to attract women to the profession.**
>
> PATRICIA MORRISON, CIO, MOTOROLA INC.

What does Motorola do best, and what does it most need to improve upon? I really think having innovation at the core of the culture here is very powerful for Motorola. You see it everywhere you go, in every function, and not just R&D. It's an empowering environment to work in. [CEO] Ed Zander has made Motorola exciting and fast-paced, and it permeates the culture. If you talk to people who've been here a long time, they see an enormous difference.

In terms of improvements, the thing that makes me most crazy is the big company bureaucracy, which is not unique to Motorola. Sometimes IT people want to control everything for good reasons, such as securing company information. But the company also faces tough competing demands, especially in the consumer market. So my challenge is solving the bureaucracy and finding ways to free it up.

– INTERVIEW BY MATT HAMBLEN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BRIEFS

Qwest CEO Sets Retirement Plan

Richard Notebaert plans to retire as chairman and CEO of Qwest Communications International Inc. once a successor is found. Notebaert took over from former CEO Joseph Nacchio in 2002. This April, Nacchio was convicted by a federal jury on 19 counts of insider trading. Qwest has not set a timetable for replacing Notebaert.

IBM to Buy Swedish Software Tool Maker

IBM has agreed to buy Telelogic AB, a Swedish vendor of software development tools, for $745 million in cash. In 2006, Telelogic reported sales of about $208 million, including approximately $89 million in license revenue. IBM said it plans to add the Telelogic operation to its Rational Software division. Telelogic makes business process management tools and products for managing complex software development projects.

Microsoft Exec to Oversee Linux Work

Tom Hanrahan has been named director of Linux interoperability at Microsoft Corp., where he will lead the company's controversial efforts to make its software more interoperable with Novell Inc.'s SUSE Linux implementation. Previously, Hanrahan was director of engineering at the Linux Foundation and senior program manager at IBM's Linux Technology Center.

Citrix Buys Assets Of NAC Provider

Citrix Systems Inc. has agreed to buy the assets of Caymas Systems Inc., an insolvent provider of network access control systems. Terms of the deal were not disclosed. Outgoing Caymas CEO Sanjay Uppal said Citrix has no plans to develop or support his company's devices. He said that Citrix hopes to take advantage of the expertise of Caymas employees, since the two companies' product lines overlap.

Pfizer Breach Illustrates Risks of Sharing Files

Personal data of 17,000 employees exposed via P2P application on laptop

BY JAIKUMAR VIJAYAN

PFIZER INC. disclosed this month that the Social Security numbers and other personal data of about 17,000 of its current and former workers were exposed after an employee installed unauthorized file-sharing software on a company laptop provided for use at her home.

Data on about 15,700 of the workers was actually accessed and copied off of the laptop by an unknown number of people on a peer-to-peer (P2P) network, New York-based Pfizer said in letters that it sent to affected employees and to state attorneys general.

Pfizer officials didn't respond to a request for comment last week. But copies of the pharmaceutical company's letters were posted on the Web site of the New Hampshire attorney general's office, and the office of Connecticut Attorney General Richard Blumenthal posted a response that he sent to a Pfizer attorney on June 6.

In his letter, Blumenthal noted that 305 Connecticut residents were among the affected employees. He asked the company to provide additional information by this Friday, including when it discovered the breach, how it responded and what kind of measures it had in place prior to the breach to protect against data compromises (see box).

The letter that Pfizer sent to the 17,000 individuals — which was dated June 1 and signed by Lisa Goldman, its general counsel — didn't specify when the file-sharing software was installed on the laptop or how the company discovered the data breach. But the letter did say that Pfizer reclaimed the laptop and disabled the file-sharing program immediately after discovering the breach. Goldman added that because the laptop was being used to access the Internet from outside of Pfizer's network, no other data was compromised.

Stark Example

The incident at Pfizer serves as a stark example of the potential security dangers presented by peer-to-peer software — dangers that were highlighted in a report released June 4 by Dartmouth College's Tuck School of Business.

The report was based on searches of P2P networks such as Gnutella, FastTrack, eDonkey and BitTorrent for traffic that mentioned the names of the top 30 U.S. banks or mapped to a specific digital footprint that Dartmouth created for each bank.

The data, which was gathered during a seven-week period from December to February, showed that a large number of people were inadvertently exposing bank account data and other personal information stored on their computers to fellow users on the P2P networks, said Eric Johnson, a professor of operations management at Tuck's Center for Digital Strategies.

Johnson, the report's author, said the data gathered also indicated that cybercrooks were lurking on P2P networks to harvest the financial data of users via targeted searches.

Data can be exposed in several ways, said Johnson. For instance, if a music file is accidentally dropped into a folder containing sensitive data, the entire folder could end up being made available on a P2P network without the user's knowledge, via wizards in file-sharing clients that can scan PCs and recommend folders containing media files for sharing.

"In many cases, [P2P users] are sharing the contents of their entire hard drive, with all sorts of information," Johnson said. And it isn't just home users who are at risk, he added. About 20% of the data analyzed in the Dartmouth study came from users at banks or their partners, Johnson said. ▸

DATA REQUEST

Connecticut Attorney General Richard Blumenthal asked Pfizer 14 questions about the company's data breach. Among them were the following:

- Prior to the breach, what steps were taken to safeguard the personal data of individuals?
- What has Pfizer done to track down and retrieve the information that was taken?
- What, if any, regulatory scheme does the company follow when responding to security breaches?
- What kind of plans have been developed to prevent a recurrence of such a breach, and what is the timeline for implementing them?

IT Error Opens Data Door at University

THE UNIVERSITY OF VIRGINIA is notifying about 6,000 current and former faculty members that their names, Social Security numbers, birth dates and other personal information may have been stolen by computer hackers between May 2005 and April of this year.

The Charlottesville-based university announced June 8 that a hacker or hackers had breached a "special-purpose Web application" that mistakenly included a link to a data table containing a variety of information about U.Va. faculty members. Investigators found that the system was broken into 54 times between May 20, 2005, and April 19, 2007, and that the records of 5,735 faculty members were accessed.

Shirley Payne, director of security coordination and policy in the university's IT department, said in an interview last week that "human error" was to blame for the table being linked to the Web application.

The application "really was not intended to deliver up this kind of information," Payne said. She added that the data table couldn't be viewed through Web searches. The hackers accessed it by breaking into the application's database and eventually finding the linked table, she said.

CIO James Hilton said in a statement included in U.Va.'s announcement that finding the data table "required a relatively sophisticated and intentional attack on the database."

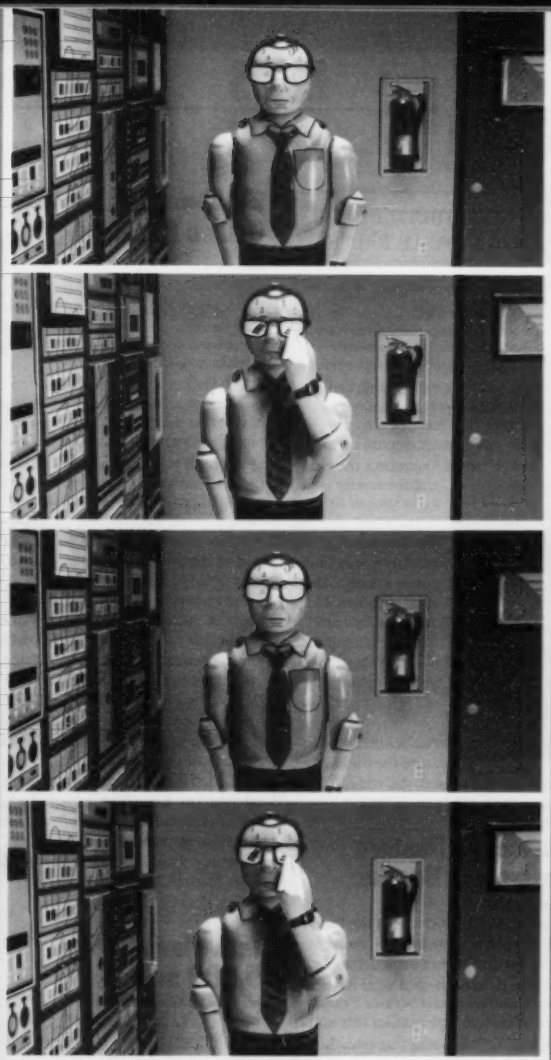
The apparent theft "adds greater urgency to our ongoing effort to remove from databases Social Security numbers and other personal information that could be accessed through the Internet and later potentially abused," Hilton added.

The school said workers in the Office of Information Technology and Communication discovered the breach as part of the ongoing Social Security number remediation effort.

The connection to the data table was removed on April 20 after an initial internal review. Then, on May 22, programmers who maintain the school's Web site found that a hacker had defaced a page. After the page was secured, a more detailed security review uncovered breaches of the data table dating back to 2005, U.Va. said.

No data related to students or employees other than faculty members was accessed, according to the university, which said it is taking unspecified precautions to minimize future security risks on its systems.

– TODD R. WEISS



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GLOBAL DISPATCHES An International IT News Digest

U.K. Health IT Chief Defends Project

LONDON

THE EMBATTLED head of the U.K. National Health Service's IT revamp initiative last week sharply rebuked critics of the program, saying that any funding cutbacks would lead to a "massive disruption" for patients.

"The program gets continuously knocked," said Richard Granger, director general of IT for the project, during a keynote address at the Procurement Solutions for the Public Sector conference here last week. "Maybe if there'd been a bit less whining and more support, it might have done [better]." Granger has led the 10-year, £12.4 billion ($24.5 billion U.S.) National Programme for IT for the past four and a half years.

Among other things, the initiative calls for the development of an electronic prescription and appointment-booking system, a patient care records service, and an X-ray archiving and electronic transmission system.

Granger acknowledged deployment problems and difficulties in integrating 10,000 pharmacies with the XML-based Electronic Prescription Service.

But he noted that so far under the program, 2,250 appointments have been booked and 17,250 prescriptions have been transmitted electronically, and 168,950 digital images related to patient care have been recorded.

■ JEREMY KIRK, IDG NEWS SERVICE

GLOBAL FACT

800k

Number of software engineers graduating annually from 35 national training schools in China.

SOURCE: DEVELOPING THE FUTURE 2007 REPORT, FUNDED BY MICROSOFT CORP. THE BRITISH COMPUTER SOCIETY, CITY UNIVERSITY, LONDON, AND INTELLECT, A U.K.-BASED HIGH-TECH TRADE GROUP

Digital Fingerprints Added to Passports

BERLIN

THE GERMAN Federal Ministry of the Interior announced this month that digital fingerprints will be incorporated in passports issued in the country.

Starting in November, all new passports will store two digital fingerprints in an embedded chip already in the passport. The chip has been used to store digital photos of people who have been issued passports since 2005, the ministry said.

Data privacy commissioners have criticized the plan, but a ministry spokeswoman noted that only readers equipped with a new cryptographic protocol can access the photos and fingerprints. The Extended Access Control system uses a secure communications channel to connect the chip and the reader over a distance of 10 to 20 centimeters, she said. The fingerprints will be stored only in the passport chips, the spokeswoman added, and local law enforcement agencies will save the digital photographs.

The country has no plans to create a central database to store the digital fingerprints and photos, she added.

■ JOHN BLAU, IDG NEWS SERVICE

Nasscom: Restore Indian Tax Breaks

NEW DELHI

THE APPRECIATION of the Indian rupee against the U.S. dollar is hurting Indian outsourcing firms, the president of the National Association of Software and Service Companies (Nasscom) said earlier this month.

Kiran Karnik noted that two-thirds of Indian outsourcers' business comes from the U.S., and the rupee has appreciated against the dollar by almost 9% in the past three months.

To help firms cope, Nasscom has asked the Indian government to restore export incentives that were once available to Indian outsourcing firms but have been phased out in recent years.

Companies seeking tax benefits now have to move their operations to special economic zones, where outsourcing firms say skilled technical staffers are not readily available.

In addition, noted Karnik, India Finance Minister P. Chidambaram last February imposed a minimum alternate tax on income gained from the tax breaks. Nasscom has asked government officials to extend the area covered by tax benefits and roll back the minimum alternate tax, Karnik said.

■ JOHN RIBEIRO, IDG NEWS SERVICE

EU Abandons Private Galileo Partners

BRUSSELS

THE 27 COUNTRIES of the European Union agreed this month to scrap a planned partnership with the private sector to create the Galileo satellite navigation system.

The Galileo system will include 30 satellites that beam signals to receiving devices on the ground, helping users pinpoint locations. Galileo will be interoperable with the U.S. Global Positioning System's 24-satellite network.

The EU expected a consortium of companies to bear two-thirds of the estimated €3.4 billion ($4.5 billion U.S.) cost of the project, but potential members failed to agree on how to organize. Some companies expressed doubts about the venture's commercial viability, noting that it will face competition from similar projects in Russia and China.

On June 8, a month after Jacques Barrot, the European commissioner for transport, proposed taking the project public, EU ministers voted to abandon the private consortium.

"Galileo is, at present, the most important European high-tech project. It is of colossal importance," said German Transport Minister Wolfgang Tiefensee. Funding plans are expected to be finalized this fall, he said.

■ PAUL MELLER, IDG NEWS SERVICE

Tata Plans to Hire 5,000 in Mexico

GUADALAJARA, MEXICO

TATA CONSULTANCY Services Ltd. (TCS) has set up a global delivery center here, where it plans to hire up to 5,000 new employees over the next five years. The facility in Mexico brings Mumbai, India-based Tata closer to its U.S. customers and their time zones, said spokesman Pradipta Bagchi.

The new operation could also help boost business in South America, where a large number of regional companies are investing in IT and related services, Bagchi said. TCS has about 5,000 employees and around 150 clients in South America, he added.

The company's new center will primarily offer software development services, Bagchi said. The hiring of additional staff in Mexico does not indicate a scaling back of operations in India, he said, noting that personnel costs are still lower in Tata's home country.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

S Central Pty., an IT services vendor in Melbourne, Australia, has acquired network services provider ExpressApps Pty. in Keysborough, Australia. Managing Director Peter Mavridis said the addition will deepen S Central's resources in its focused technology practices. Terms of the deal, which closed earlier this month, were not disclosed.

■ DARREN PAULI, COMPUTERWORLD AUSTRALIA

Taiwan's annual Computex IT exhibition next year will allow Chinese companies to participate for the first time. Chinese companies have not been allowed to exhibit because of space issues, said Walter Yeh, executive vice president of the Taiwan External Trade Development Council. "Next year, we will have space," he said at a news conference at the 2007 event, held earlier this month.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Telecom New Zealand Ltd. has streamlined order management and billing by implementing Savvion Inc.'s business process management software. Wellington-based Telecom New Zealand said it is looking to use BusinessManager 7.0 to improve customer loyalty programs. The deal's value was not disclosed.

■ SANDRA ROSSI, COMPUTERWORLD AUSTRALIA

Baidu.com Inc., the developer of China's largest search engine, said this month that it has no plans to expand into Europe. The Beijing-based firm said that "rumors alleging that Baidu.com is expanding into Europe are groundless." The company recently launched a Japanese search engine as a foray into new markets. Baidu plans to spend $15 million this year to expand the Japanese site, which is blocked in China.

■ SUMNER LEMON, IDG NEWS SERVICE

The International Telecommunications Union has created a portal, called the ICT Security Standards Roadmap, to provide a one-stop source for security information. The ITU, the telecommunications agency of the United Nations, said the portal lists standards-development organizations throughout Europe along with their standards specifications. The site will eventually detail other standards bodies' ongoing projects, the agency said.

■ JEREMY KIRK, IDG NEWS SERVICE

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Cheetah Scratches Itch of Informix Users

BY ERIC LAI

For years after IBM bought the Informix database technology in 2001, Informix users worried about the long-term prospects for the software, which was obscured by the long shadows cast by IBM's flagship DB2 database.

Informix "was IBM's dirty little secret," said Stuart Litel, president of the International Informix Users Group (IIUG) and chief technology officer at Kazer Corp., an Informix reseller and systems integrator in Lee's Summit, Mo.

But the worries began to subside after IBM released Informix Dynamic Server 10, a major upgrade of the primary Informix database, in March 2005. And last week, the company announced IDS 11, saying that the new version — which was code-named Cheetah — boosts transaction processing speeds and includes new features such as mainframelike high availability and disaster recovery capabilities.

No More Neglect

More important, Informix backers such as Ron Flannery, president of Novi, Mich.-based reseller One Point Solutions Inc., expect IBM to finally make amends for years of marketing neglect. "I believe that IBM will market Cheetah as much as it did DB2 9 Viper," Flannery said, referring to the latest release of DB2 for Linux, Unix and Windows.

WorldWinner Inc., a Newton, Mass.-based developer of online games, has used Informix databases to support its Web site since 2000. Mike Frank, WorldWinner's vice president of operations, said Cheetah's support for high-availability clustering will enable the company "to seamlessly grow our database server capacity in a cost-effective manner and in whatever increments we desire."

Although IBM's database of choice does seem to be DB2, the vendor has not left IDS users like WorldWinner "in the cold," Frank said. "The additional development that has gone into the product is great, and the technical support remains top of the line," he explained, noting that IBM "has often gone above and beyond" to help keep WorldWinner's Informix-based systems stable.

Despite IBM's neglect, Litel and other Informix supporters said there is proof that the technology continues to thrive. For instance, the IIUG now counts 20,000 members, double what it had five years ago, according to Litel.

Wayne Kernochan, an analyst at Illuminata Inc. in Nashua, N.H., wrote in a recent blog posting that Informix won't become one of the top databases again. But, he added, it could become "a little less of a boat anchor" for IBM.

Experts Debate Microsoft Patch Priorities

BY GREGG KEIZER

As Microsoft Corp. last week issued patches for 15 vulnerabilities in its operating systems, browser and applications, security experts debated which flaw should be fixed first.

The June updates fixed multiple bugs in Windows, Internet Explorer, Office, Outlook Express and Windows Mail. Of the 15 flaws, nine were labeled "critical," Microsoft's most serious ranking. The vendor characterized two as "important" and two others as "moderate."

Security experts disagreed over which of the June flaws should be fixed first.

Amol Sarwate, manager of the Qualys Inc. vulnerability research lab, said patches for vulnerabilities MS07-031 and MS07-035, which "affect the core of the Windows operating system and require no additional software to exploit," should be patched first.

The MS07-031 bug could let attackers, particularly phishers, feed malware to users' machines, he said. The flaw, which affects the handling of Secure Sockets Layer in Windows 2000, XP and Server 2003, could "give users a false sense of security when they connect to a secure site," added Sarwate.

However, David Dewey, research manager of IBM's Internet Security Systems X-Force team, contended that the MS07-031 flaw is not serious.

"It looks bad, and at first glance it's the one for this month, but it's not exploitable," said Dewey, noting that X-Force's research shows that the bug can't be attacked with known techniques. "No one will exploit this in the near term," he said.

Two Votes for Patching IE

Dewey recommends that users first patch bugs in IE6, IE7 and Visio, the business and technical drawing application that's part of the Office lineup.

"Both are very similar to other vulnerabilities that attackers have leveraged," he explained.

Symantec Corp. researchers also urged users to quickly plug the holes in Internet Explorer. "[We] rate the vulnerabilities in Internet Explorer as the most critical," the company's response team said in an e-mailed alert.

Sarwate also noted that the latest batch of patches includes "the first bulletin that affects only Vista." Previous vulnerabilities in Vista came from reused code that had been drawn from earlier editions of Windows, he explained, but this vulnerability "is in the brand-new code written specifically for Vista."

Updates are available from the Microsoft Update and Windows Update services, and through Windows Server Update Services.

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The Rise and Demise of Network Computing
Web Informant – It is sad when something that you brought into this world leaves it, and I am feeling a bit blue about the demise of Network Computing magazine, announced today. Even though I haven't been involved in the publication in many years, it still was my baby – it was born in the summer of 1990 [...] read more
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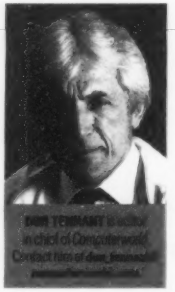
DON TENNANT

Very Best Places

A COUPLE OF YEARS AGO, I wrote an editorial in which I recounted a story about an incident that left an impression on me as a youth and that I still think about 40 years later. Titled "Leaving a Mark," the editorial used the incident — a case in which my seventh grade English teacher embarrassed me in front of the class as punishment for an infraction that I didn't actually commit — to illustrate how deeply an unjust act can affect a person.



DON TENNANT is editor in chief of Computerworld. Contact him at don_tennant@...

The context was a discussion of women in IT, and the injustice many of them endure when they receive salaries that are lower than those of their male counterparts. I've written on a number of occasions about how that disparity is contributing to the declining percentage of women in the IT workforce, and about how that decline is unhealthy for the IT profession.

I grew up in Fairfax County, Va., and my K-12 experience — including that seventh grade English class — took place within the Fairfax County Public Schools system. So it was with a certain amount of hometown pride that I learned that FCPS ranked No. 10 on *Computerworld*'s 2007 list of Best Places to Work in IT (page 31). I was also pleased to see that among organizations with 10,000 or more U.S. employees, it ranked No. 6.

What was especially gratifying, however, was finding that FCPS ranked No. 5 on the list of best places for diversity — a ranking based on the percentage of women and minorities in staff and managerial positions. It's hard to miss the significance of that when you read Julia King's profile of Cathy Sels, the school system's director of technology operations, in the "Prized Employees" section of our Best Places coverage. According to the CIO at FCPS, Sels "has consistently proven herself as an IT leader." And that CIO is in an excellent position to make that assessment. She's Maribeth Luftglass, a member of the 2007 class of *Computerworld* Premier 100 IT Leaders.

It's also worth noting that 34% of the school system's 449 IT employees are women. If you look beyond FCPS, you'll find that that percentage is consistent with the 33% average among the 100 companies on this year's Best Places list, and that at two of the top three employers, the proportion rises to over 40%. Those are telling numbers when you consider that, according to the U.S. Bureau of Labor Statistics, women constituted 26.2% of the IT workforce in 2006. It's almost certainly even lower now; the decline in that percentage over the past decade, and projections for a continuing drop in the years ahead, have been well documented.

Looking further into the diversity statistics, moreover, you'll find that the top two organizations on the list of best places for diversity, the University of Miami and The Capital Group, rank No. 2 and No. 4, respectively, on this year's Best Places to Work list.

So, what should we make of all this? Do these organizations attract and retain greater numbers of women and minorities by virtue of their overall appeal, or is the fact that they employ greater numbers of women and minorities core to what makes them the best places to work?

It's a chicken-or-egg question that doesn't lend itself to a dispassionate, scientific argument. But some things you just know, just as most of us knew, even as children, that injustice deflates the human spirit. As most of us know by now, diversity is one of those things that elevates that spirit. And it's where that elevation exists that you'll find the very best places to work.

Don Tennant

READERS' LETTERS

Shades of Meaning In White Papers

VENDOR-COMMISSIONED white papers are useful, but probably not in an obvious way ["A Question for You," Editorial, May 14]. When I research a product or technology, I listen carefully to what vendors have to say, in either their own or commissioned white papers. More accurately, I listen to what they say about the competition and what they don't say about themselves. This can take a bit of work, and the more documentation that's available, the easier it is to ferret out the truth.

Dave Bachand
Data network manager, Eastern Connecticut State University, Willimantic

IT'S NOT a question of credence. It's just that vendor-sponsored white papers don't answer the questions I ask, and they are too long. For example, *Computerworld* has published a number of articles on outsourcing, one of which I found so valuable that I saved my hard copy. I didn't want to know the status of Russian outsourcing; I wanted to know how Indian outsourcing works at other companies, and what pitfalls to avoid. Ideally, I would expect *you* to read about the status of Russian outsourcing and then present the data to me in a paragraph or two (which you did in your editorial – everything I care to know about Russian outsourcing was right there).

Most vendor-sponsored white papers are vastly inferior to "real" white papers. I cannot count the times I have downloaded one with a tantalizing title, only to find watered-down content that was hurriedly prepared. And I resent the waste of my time: to register on a site, to download the paper, to read enough to determine if it's a time-waster, and to talk to the salespeople when they call to see how I liked the paper, blah blah blah.

Cathy Taddei
Portland, Ore.

I TEND TO think of vendor white papers more as "tan papers." In the worst cases, they are merely advertising with a thin veneer: "brown papers."

Steve Pratt
DBA, Illinois State Police, Springfield

Vendor-sponsored white papers are no better than vendor-written papers. The appearance of impropriety is enough for me to dismiss them as no better than something a vendor's PR department developed. Only truly independent, head-to-head reviews and decent customer referrals hold any weight with me and most of the peers with whom I usually discuss such technologies.

Ben Weinberger
CIO, Ruden McClosky, Fort Lauderdale, Fla.

Computerworld Gets a New Look and Size

PREVIEW: Newsweekly will change to magazine format on July 9, starting with our special 40th anniversary issue.

THE PRINT edition of *Computerworld* will be changing, in ways big and small, next month. Starting with the July 9 issue, *Computerworld* will switch from a tabloid-size publication to a magazine-size format, like *Time*'s and *Newsweek*'s.

The July 9 issue will be extraordinary for another reason: It will have a special report commemorating *Computerworld*'s 40th anniversary. The special edition will look back at the IT flops and successes of the past four decades, in addition to looking forward to the next generation of IT leaders.

The subsequent issue, July 16, will be more typical of the new *Computerworld* magazine.

Editor in Chief Don Tennant announced the change to a magazine format in his April 2 editorial. "It was driven, more than anything else, by financial considerations," Tennant explained. "The fact is, it costs more — a lot more — to produce a tabloid-size publication than it does to produce a magazine-size publication, because of the differences in printing, paper and postage expenses. Like just about every other publication around, we've had to cut print costs because advertisers are shifting more and more of their ad dollars from print to online. It's a simple fact of publishing life."

The business decision required a fast-paced redesign of the publication that was led by Stephanie Faucher, *Computerworld*'s award-winning design director, and Mitch Betts, executive editor.

The redesign retains all of the signature departments — and the same fonts — found in today's *Computerworld*, so that even in a different format, it "still looks like *Computerworld*, and yet it also looks fresh," Tennant said. Faucher said the new design is intended to be clean, uncluttered and sophisticated.

The redesign also reflects changes in IT reader habits. These days, readers are likely to get their breaking news from *Computerworld.com* and other Web sites, so the emphasis in the weekly magazine will be on analyzing what that news means to enterprise IT managers and executives. Plus, some articles will have boxes (with distinctive yellow bars) that point readers to additional information or commentary at *Computerworld.com*.

The News section will have two parts: a News Digest summarizing the week's most important corporate IT news; and the longer, more analytical stories that are unique to *Computerworld*. The redesign will also showcase the publication's newest addition: The Grill, a two-page interview with an IT luminary or interesting personality.

The features section will include in-depth articles, Security Manager's Journal and other rotating departments, such as QuickStudy, Future Watch and IT Mentor.

Readers will find a few familiar elements in new locations. Tennant's editorial column will be near the front of the magazine, for example, and a weekly installment of Career Watch will be near the back.

WHAT'S CHANGING

- The magazine size debuts July 9.
- The cover will highlight one main story, plus an index of the top stories inside.
- The editor in chief's column and readers' letters will be near the front.
- The News Digest will summarize the week's news.
- Career Watch will appear every week.

WHAT'S NOT

- Our editorial mission, quality and audience focus
- Our unique news analysis, feature articles, Knowledge Centers and special reports
- The Grill interview and the On the Mark column
- Feature departments such as Security Manager's Journal, QuickStudy, Future Watch and IT Mentor
- Shark Tank and Frankly Speaking

Faucher said the pacing of the article pages is different for magazines than it is for newspapers. "With magazines, you start with appetizers, then you get to the meatier articles, and then wrap up with the dessert," she said. In this case, the "dessert" on the back pages will continue to be Shark Tank — a compilation of true tales of IT woe — and Frankly Speaking, by award-winning columnist Frank Hayes.

This index will identify news analysis articles, Q&As and important opinion columns inside the magazine.
In each issue, we'll offer a quick read of the week's top corporate IT news.
Articles will have pointers to online resources at Computerworld.com.
News Digest
TJX Data Breach Gets Even Worse
COMPUTERWORLD
Home Office Lockdown
Most companies still lack policies for virtual offices. Here are some ways to allay the huge data risks they pose.
Inside

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SPECIAL REPORT

06.18.07

Quicken Loans
The mortgage lender holds the top spot for the third year in a row. Opportunities to implement good ideas make employees want to stay put. **PAGE 34**

The 100 Best
A list of this year's Best Places to Work in IT, plus additional rankings for the tops in small, midsize and large companies. **PAGE 44**

Prized Employees
Their organizations try hard to keep them happy, with top-notch benefits, among other things. And for these five IT staffers, it's working. **PAGE 72**

H. Lee Moffitt Cancer Center & Research Institute IT employees (from left) Fausto Gonzalez, Julius Miyawa, Veronica Cruz, Zachariah Johnson and Ed Martinez.

PRESTON MACK

100 BEST PLACES TO WORK IN IT 2007

14th Annual Report

A sense of commitment, and connection, keeps IT staffers at these top companies jazzed up about work.

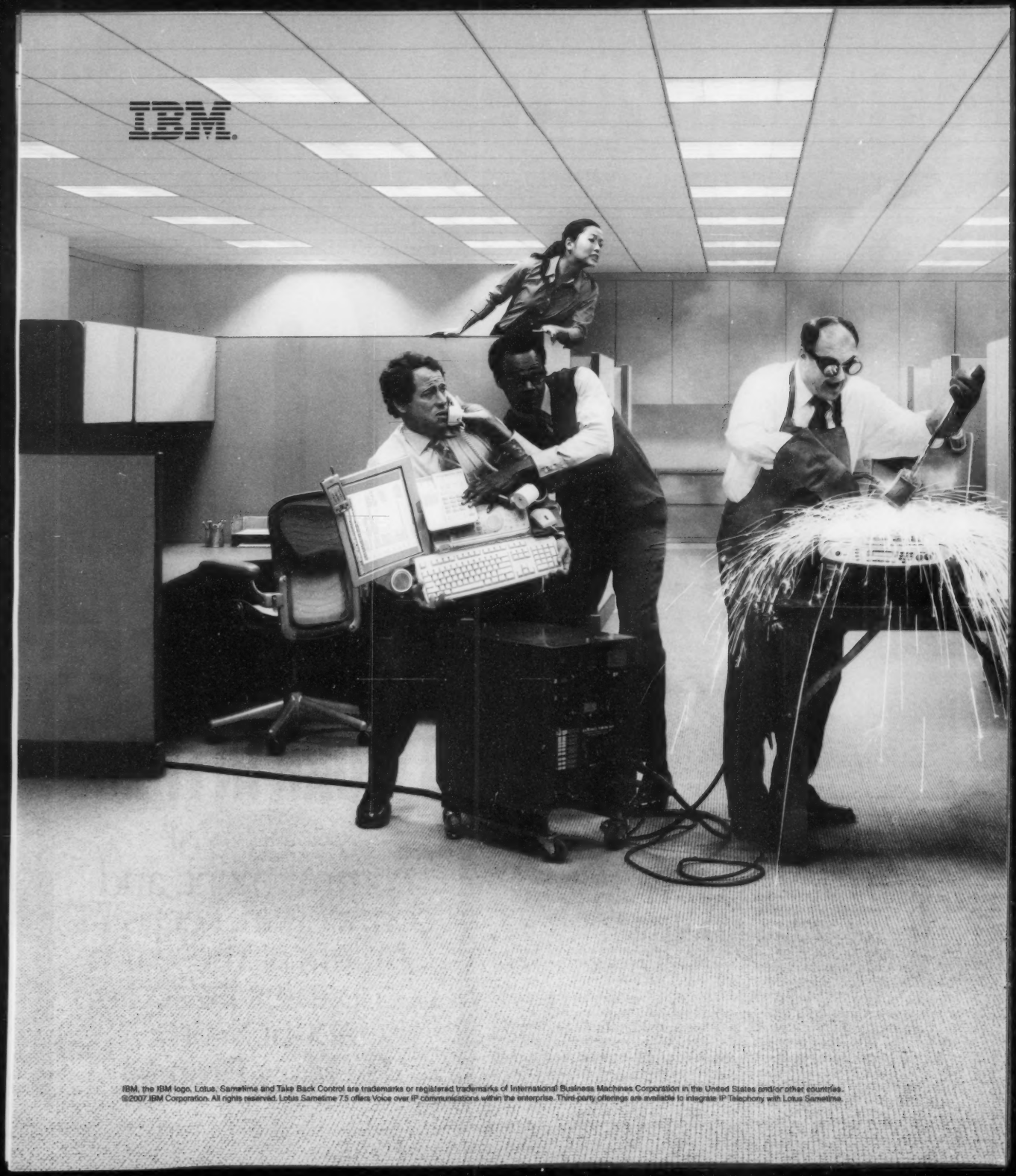
By Mary Brandel

IN 2004, when Ed Martinez became CIO at the H. Lee Moffitt Cancer Center & Research Institute in Tampa, Fla., the facility's IT staff was struggling with morale. The institute had grown rapidly since it opened in 1986, but within IT, that phenomenal growth was causing problems. The group had seen three CIOs come and go within the same number of years. Half of the 100 staffers didn't know the other half, and roles were as ill-defined as the mission of the group itself. "There was an overall spirit of 'Do the work; get the check,' " Martinez says.

> **One of our mottos is, 'This is the place where we're going to cure cancer,' and if we don't have the right people working for us, we won't get there.**
>
> **ED MARTINEZ**, CIO, H. LEE MOFFITT CANCER CENTER & RESEARCH INSTITUTE

As with any turnaround, Martinez found himself making some unpopular decisions, including layoffs and title changes. But in the past two and a half years, he has also expanded the staff, promoted some people, increased some salaries by $5,000 to $20,000, broken

Continued on page 34



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_INFRASTRUCTURE LOG

_DAY 56: Our voice and data networks are out of control. Nothing's unified. Nothing's integrated. We have to use different devices for different things. Gil's had enough.

_He's welding every device in the office together with a blowtorch. He calls it "The Unifier."

_DAY 57: I found a better way: Unified Communications and Collaboration solutions from IBM. Now we can integrate our networks to give us real-time access on virtually any device. With the IBM Lotus® Sametime® 7.5 platform we get way more than IM. It combines IP Telephony, Web conferencing and more into a single interface. We're working fast and for less.

_Does this mean our office is no longer a hard-hat zone?

Lotus.

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Quicken Loans IT employees (back row, from left) David Polidori, Chris Risner and Frank Laura; and (front row) Jona Jeffords, Melanee Findley and Rick Scero.

MICHELLE ANDONIAN

100 BEST PLACES TO WORK IN IT 2007

No. 1

Quicken Loans

Seeing is believing for visitors to this three-time top-ranked firm.

BY JULIA KING

After lunching recently with an old friend he hadn't seen in a few years, Jona Jeffords invited his buddy to come back and see where he works as a software engineer at Quicken Loans Inc. in Livonia, Mich.

The friend took in the brightly colored murals on the walls, the open floor plan, the banners for various IT teams with names like "Speed Demons" and "Jedi Council" and, of course, the free-flowing popcorn and cappuccino. He also noticed how the CIO and other executives sat at desks alongside their teams rather than in remote offices off in a corner.

"By the time he left, he was asking me where he could go and apply. Just by the vibe he got, he knew he wanted to work here," Jeffords says.

None of this comes as a surprise to Quicken Loans CIO Frank Laura. A significant percentage of Quicken Loans' growing IT staff have come to the company via employee referrals. "Good people here know other good people," Laura says. In fact, through Quicken Loans' Talent Scout program, employees collect $2,000 for every new hire they refer.

What keeps them with the company, IT employees say, is access to cutting-edge technology, daily opportunities to implement good ideas, a culture that encourages and rewards creativity, and oh yes, those over-the-top holiday parties and bus trips to NBA games and rock concerts. (Quicken Loans' founder and chairman, Dan Gilbert, also owns the NBA's Cleveland Cavaliers.)

Rick Scero, who manages a business intelligence team, had been with the company only three or four months when an executive handed him a book of tickets for suite seats at a Detroit Tigers baseball game. "He didn't come over and say, 'Here's a ticket for you.' He said, 'Here's a whole book of tickets for your team and their families,' " Scero recalls. It's no wonder, Scero adds, that he has been asked by more than a few friends and family members for help getting a job at the company. "I can't think of any reason why I wouldn't want them to work in an environment like this," he says.

"We don't have one thing. It's 1,001 little things that make us unique," says Laura. But company culture seems to top that list of little things. From Day One, IT employees are immersed in the Quicken Loans culture, which they describe as "democratic," "energetic," "creative," and "work hard/play hard."

On his first day of orientation, David Polidori, a senior technical support analyst, recalls how he met and talked at length with Quicken Loans' top three executives – Gilbert, CEO Bill Emerson, and President and Chief Financial Officer Patrick McInnis. Like all Quicken Loans employees, he went home that day with the executives' office and cell phone numbers, as well as a firsthand explanation of the mortgage market, the company's business, and where and how he fits into it.

That knowledge helps employees such as Melanee Findley, a software engineer, feel genuinely empowered to make suggestions or take action without first jumping through a lot of bureaucratic hoops.

No matter what your role or title at the company, "everyone is empowered to do whatever it takes to make things work or work better," Findley explains. "It's about going ahead and fixing things that you see need to be fixed, but not having to go through a chain of command."

Project managers also have the latitude to make major decisions and act on them. For example, team leaders can reward exceptional performance with spot bonuses as high as $10,000.

There also are plentiful opportunities for skills growth and overall career advancement, employees say. Laura, for example, was promoted to CIO in January from his previous post as director of software engineering.

"It's not at all your typical corporate culture," says Chris Risner, a software engineer who has been with the company for two and a half years. "I get medical and dental and the same benefits you get at most other companies. But where Quicken Loans really shines is in all the other things. It's easy to be happy here." ▸

WHY IT'S A TOP PICK

- 3 days of training offered to IT workers last year
- 8% of IT employees were promoted last year
- Ranked No. 6 for benefits
- Ranked No. 3 for retention

Continued from page 31

down the wall between the hospital and research IT groups, and sponsored events to build camaraderie, including off-site retreats and social events. He was also able to add professional development opportunities and work/life benefits such as flexible schedules and elderly care, thanks to Moffitt's overall drive to become an employer of choice in the Tampa region.

But the biggest change — and one that helped propel the organization to the No. 68 spot on *Computerworld*'s 100 Best Places to Work in IT list — was the effort made to link the IT group for the first time to the organization's mission, which is to contribute to the prevention and cure of cancer. This was vastly aided by Moffitt's launch of an ambitious program to build a data repository that integrates genetic information with clinical records, with the goal of someday creating personalized cancer treatments.

"One of our mottos is, 'This is the place where we're going to cure cancer,' " Martinez says, "and if we don't have the right people working for us, we won't get there."

Today, his staffers seem to feel the same way. "The technology I provide touches every patient every day," says Zachariah Johnson, manager of IT clinical systems at Moffitt. And he should know, thanks to time spent shadowing doctors, meeting with physicians, nurses, pharmacy personnel and patient advisory groups, and even visiting patients at their bedsides.

"It's fun to open a box with a new computer in it and see what it can do. But that gets old real quick," Johnson says. "It's much more satisfying to know hundreds of patients a day can have a more pleasant experience because of something you did."

It might be popular to blame technology for the increased isolation that sociologists report seeing in the U.S. today, but IT workers at other companies on the 2007 list of Best Places to Work in IT echo Johnson's sentiment. They say they feel vitally connected to a greater whole and can accomplish meaningful work in an energetic environment alongside co-workers they respect and like.

In fact, working in a challenging and enjoyable environment was the second most important aspect of their jobs for the more than 27,000 IT workers surveyed at this year's Best Places, bested only by the desire to be fairly compensated. And for a group that's often stereotyped as introverted, indepen-

Continued on page 36

100

2007

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University of Miami IT employees (from left) Justin Green, Valeryia Volkova, Aaron Metz, M. Lewis Temares, Lindsay Boatner, Tony Senita and Sheryl Borg.

JACKIE ZUCKER

100 BEST PLACES TO WORK IN IT 2007

No. 2

University of Miami

Sunny location, camaraderie and career support. What's not to like?

BY MARY K. PRATT

When Sheryl Borg made the leap from human resources to the IT department at the University of Miami, she knew she had landed in a good place.

"For me, it stood out as a very positive environment where people had opportunities to learn on an ongoing basis," says Borg, who started as a business system analyst last September after spending 21 years in human resources.

Borg's not the only one praising the university's IT shop. The University of Miami, a perennial on *Computerworld*'s Best Places to Work list, ranked second for the fourth year in a row.

Neither luck nor chance has anything to do with such success. Vice President and CIO M. Lewis Temares and his managers strive to maintain an organization that builds individual careers and great teams through career development, mentoring and social interaction. The end result is a workplace where people want to be.

"Sustaining a great work environment is a challenge of blending expected, familiar, predictable workplace characteristics, like a culture of fairness, loyalty, benefits and professional development opportunities, with creative, fresh ideas, projects, approaches, programs, etc.," says Associate Vice President Tim Ramsay.

Part of the appeal of the university is its camaraderie, says Jackie Zucker, director of applications development. Workers enjoy company-sponsored social events and informal get-togethers. Employees have been known to lend one another their cars and celebrate birthdays in the office. And they recently sent care packages to a co-worker's Army Reserve unit that was activated to serve at Fort Stewart in Georgia.

Even Temares, who has served as the dean of the College of Engineering for the past 13 years, gets in on the social action. He holds quarterly IT department breakfasts to introduce new workers, socialize, talk about happenings in the department and at the university, and acknowledge his staff's accomplishments.

Staffers say social benefits aren't the only selling points at their workplace. Managers at all levels support professional growth, too, they say.

"People have the opportunity to move around and explore and try and learn new things," says Mike Zucker, director of applications development (and Jackie Zucker's husband).

The IT group also has a leadership institute for middle management and an executive exchange program, and managers mentor new employees. For example, programmers go through three months of training during which they learn about how they'll work in the organization. "We're looking for the long-run benefit of having them fit into the culture," Temares says.

Meanwhile, the interview process is designed to look for people who are strong team players, and Temares says he fosters promotions from within. He also promotes departmental growth, bringing in new technologies so employees can test them and consider how they could be used to further the university's goals – something that helps workers stay up to date.

While these practices taken individually wouldn't establish the school as an outstanding IT shop, taken together they sustain the dynamic workplace that has earned the university its top rankings year after year, Temares says.

Heikki Topi, chairman of the computer information systems department at Bentley College in Waltham, Mass., says he's aware of the good reputation enjoyed by the University of Miami's IT department. He also says that maintaining such environments takes commitment from management and top executives.

"It genuinely requires that the highest level of management, from the CIO down, follow these principles in their everyday work," he says. "You can't do it for two weeks and say, 'Now I've done it.' You have to keep doing it." ▸

WHY IT'S A TOP PICK

- Ranked No. 1 for diversity: 51% of IT managers are minorities
- Ranked No. 6 for retention
- Ranked No. 8 for training
- Ranked No. 9 for career development

Pratt is a Computerworld contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.

Continued from page 34

dent and even cynical, it's notable how many mention the "f" word — family — when describing the atmosphere at their workplaces.

That sense of connection can be felt in myriad ways. For Jeff Spaude, business process analyst at Pulte Homes Inc. (No. 69), it was when the company owner sent out a DVD reminding employees to keep their focus on faith, family and the company — in that order — despite the home-building industry downturn.

For Dan Davis, group manager of IT at Anheuser-Busch Cos., which hit the list at No. 9, it's the $200 debit card given to each full-time employee to buy a Budweiser for anyone they see drinking a competitor's product.

For Monique McKeon, an application manager in the commercial lines business unit at The Chubb Corp. (No. 63), it's being invited with 15 other assistant vice presidents to a casual lunch with the CEO. And for Bob Talda, programmer/analyst specialist at Cornell University (No. 40), it's the fact that the school found a new position for him after he was fired by a manager with whom he didn't get along. "Instead of shrugging, they showed a sense of loyalty that just doesn't exist anymore at most organizations," Talda says.

And that type of environment doesn't just happen. These Best Places nurture it by establishing mission statements that explicitly link IT activities to business goals, bringing IT workers into strategic discussions, promoting group cohesiveness, keeping policies as flexible as possible and providing no-holds-barred opportunities for growth.

Getting to the Table

That's a wake-up call for employers who could be faced with heightened competition for IT talent in the coming year. Hiring is expected to increase by 12% for IT professionals, the second-highest increase since the third quarter of 2002, according to IT staffing firm Robert Half Technology. Of this year's Best Places, 64% said they plan to increase their U.S.-based staffs this year, on average by 7%.

And this is a group of professionals with a propensity to be lured to jobs that offer opportunities for greater challenges. That's particularly true for the younger generations of IT workers, who tend to be loyal to the project team they're working with at any given time but not to the organization itself, according to Ben Dattner, principal at Dattner Consulting LLC, a consulting

Continued on page 38

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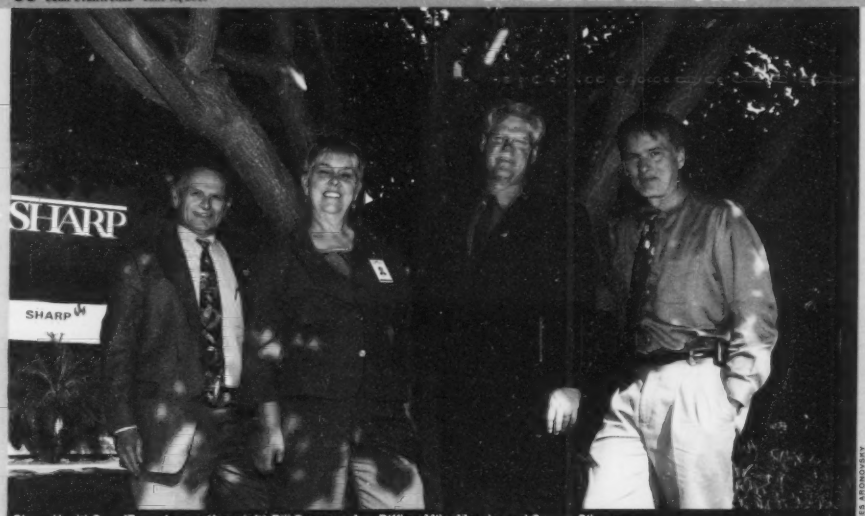

Sharp HealthCare IT employees (from left) Bill Spooner, Ann Diffley, Mike Murphy and George Gilmore.

JAMES ARONOVSKY

100 BEST PLACES TO WORK IN IT 2007

No. 3

Sharp HealthCare

An engaged IT workforce translates into better patient care.

BY GARY ANTHES

Employees at some companies rave about the great benefits – generous stock options, for example. At other companies, workers say they love the location; maybe they can hike in the mountains or go to the beach on weekends. Still others cite some special corporate culture, the company picnics and retreats, or the accessibility of top management.

At Sharp HealthCare in San Diego, it's all of the above, and more. Employees say the company has terrific management, great benefits, a warm corporate culture and a quest for professional excellence that makes them stay year after year. The company's efforts to improve on all those fronts pushed Sharp to the third spot on this year's Best Places to Work in IT list.

Sharp hasn't found a magic bullet that other companies might rush to adopt. Rather, it comes down to a sustained commitment to six "pillars of excellence": quality, service, people, finance, growth and community.

"We call it 'the Sharp Experience,'" says George Gilmore, director of IS administration. "It's about making Sharp the best place to work, the best place to practice and the best place to receive care."

Others have taken notice. Sharp has won numerous accolades. In February, for example, *Modern Healthcare* magazine named it the "best integrated health care network" in California and ranked it No. 18 nationally. Last year, Sharp received the state-level equivalent of a Malcolm Baldrige National Quality Award through an affiliate program.

Bill Spooner has been at Sharp for 26 years, the past 11 of them as CIO. "What keeps me going? Sharp has a really good reputation in the community. We have absolutely the best boss in the world and a great leadership team," he says. "Our CEO is a real people person and a great problem-solver. We don't have a big budget, but we look hard at the investments we make and really try hard to improve the organization."

Spooner says Sharp went through some financial difficulty in the mid-1990s and almost sold out to another health care firm. But instead, it embarked on a number of quality programs that grew successively more refined before culminating in the Sharp Experience umbrella program in 2001. "We started to improve satisfaction at all levels of employee," Spooner says. "A lot of it was employee empowerment, rewards and recognition, motivation and cheerleading."

Indeed, quite a lot of cheerleading goes on at Sharp. There is an annual assembly of all 14,000 employees, held in three half-day shifts. "We celebrate our accomplishments from the past year, we have some leadership and motivational presentations, and we talk about what we are trying to do for the next year," Spooner says. "We also have awards – not money, but recognition, trophies and so on."

Sharp managers meet quarterly for a daylong session with a similar format. The IT staff meets quarterly as well, and each physical facility has get-togethers – managers meet monthly and full staffs quarterly.

Ann Diffley, a customer support systems analyst who has been at Sharp for 24 years, says she particularly enjoys the annual Thanksgiving potluck meal by and for the IT department. "Everybody gets together and really has a good time," she says. "I can remember when we started out with one turkey, and this year we cooked 11 or 12."

It's not all fun and games at Sharp, however. Diffley is the current chairman of the IT "employee action team." Each year, the team is reconstituted, mostly with rank-and-file staff members, and given two action items from the annual employee survey. The idea is to take two high-level goals that surface in the survey and figure out how to make them reality. This year, the team is focused on improving communication between IT and other departments and on determining how IT can work more effectively with doctors to provide better patient care.

One notable accomplishment of the action team was to create a "walk-in-my-shoes program," Spooner says. "So people go to another department and spend a half day or day working with somebody else, side by side, to learn their job and learn a better appreciation for it."

WHY IT'S A TOP PICK

- $3,500 annual training budget per IT employee
- 49% of IT managers are women
- Ranked No. 8 for benefits
- Ranked No. 10 for retention

Continued from page 36

and research firm in New York. "There are plenty of books written about the whole world adopting the free-agent mentality," he says.

But if you help these employees forge a connection, you might be able to keep them longer. "Your best companies basically wrap their arms around people in a real way, share their vision of the company and make sure the employees are a part of that vision," says Katherine Spencer Lee, executive director of Robert Half Technology and a *Computerworld* columnist.

Vision-sharing has been a big part of the experience for Davis, who just finished rolling out an animal health care system across all of Anheuser-Busch Entertainment's adventure parks, including SeaWorld, Discovery Cove and Busch Gardens. The success of the project, he says, depended on IT being called in when the park veterinarians were first discussing the need to share information across the facilities. Through some out-of-the-box thinking, he says, the group was able to adapt an existing health care system designed for humans. "We have a close tie to our customers," Davis says. "It's not an 'us/them' relationship; it's a 'we.'"

"[The CEO] wants to make sure we're not just order-takers, and that's a culture we think works best if it starts at the top," says Joe Castellano, who became CIO at Anheuser-Busch this spring after 24 years at the company, most recently as vice president of human resources.

That's also the case at Pulte Homes. "Our people usually get involved at the stage where there's still a question and not an answer," says CIO Jerry Batt. A case in point was when the construction department changed its building model, spurring changes to the scheduling system. "We had a team of people talking routinely with the vice president of construction about his vision of what he wanted to accomplish," he says. "I've never seen a more jazzed group of IT people."

Question Authority

But that also means fostering an environment where ideas can percolate, which in turn means favoring flexibility and innovation over policy and hierarchy. "People in technology are independent thinkers because their jobs are really about creativity and teamwork and about challenging established wisdom and innovating," Dattner says.

Having worked at a large telecommunications firm before joining Pulte

Continued on page 42

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100 BEST PLACES TO WORK IN IT 2007

By the Numbers

Top-tier companies manage to get many things right, from the best people to the best training.

SOURCE: 27,038 IT EMPLOYEES FROM THE 100 BEST PLACES TO WORK IN IT 2007

The Typical Best Place

$8.1B In revenue

74 Years in business

29,993 Total number of employees

904 Total number of IT employees

33% IT staff members who are women

33% IT managers who are women

25% IT staff members who are minorities

16% IT managers who are minorities

$240.6M IT budget

$2,143 Spent per IT employee on training annually

7 Training days offered annually for IT staff

42 Hours in the average workweek

SOURCE: 100 BEST PLACES TO WORK IN IT 2007 COMPANY SURVEYS

What's most important to you about your job?

94% Being fairly compensated for the work I do.

93% Working in a challenging and enjoyable environment.

90% Having access to training and opportunities that further my skills.

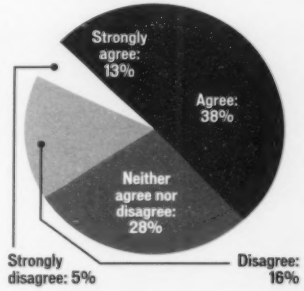
88% Having the means and opportunity to further my career.

73% Being able to work with cutting-edge technologies.

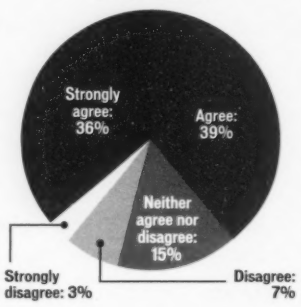
64% Working with a group of people who are culturally and ethnically diverse, with a range of opinions and perspectives.

NOTE: Multiple responses allowed.

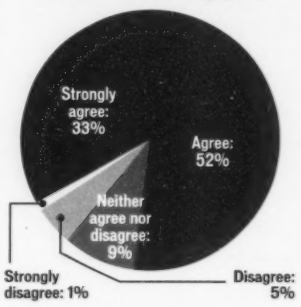
I have a well-defined career path.



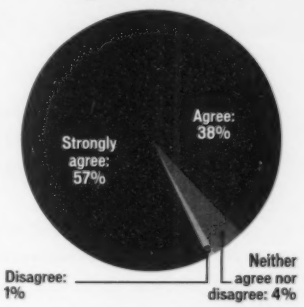
I feel my job is secure.



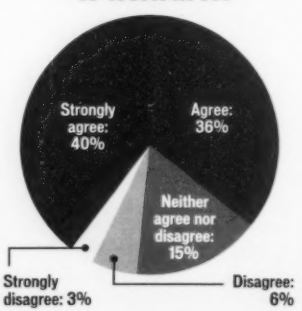
I have access to the tools and technologies I need to do my job.



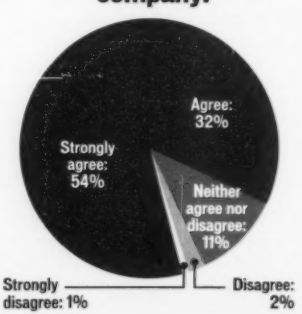
I have a good relationship with my co-workers.



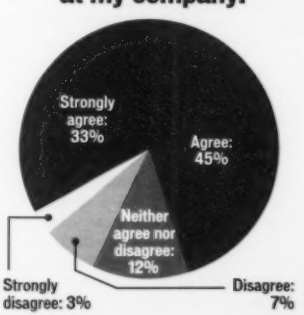
My company is a great place to work in IT.



I am proud to work for my company.



There are opportunities for career growth at my company.



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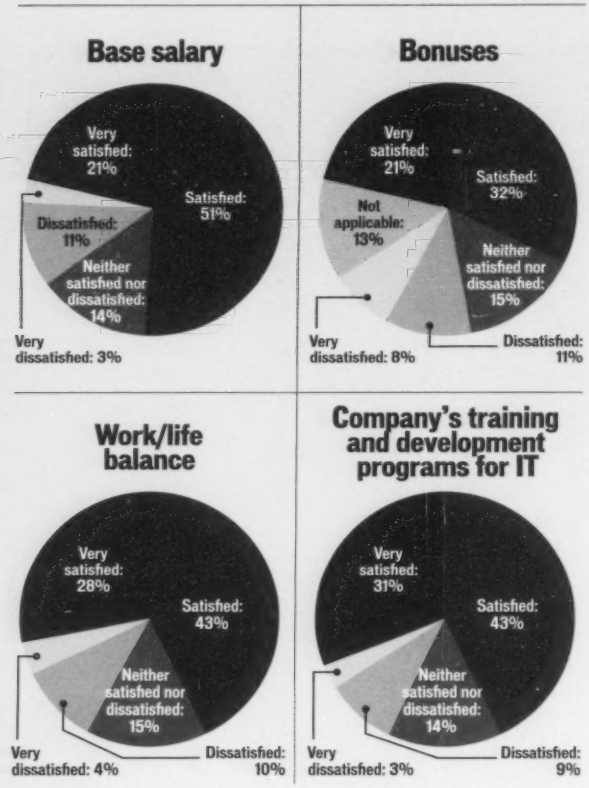
Most Best Places employees are happy with their compensation and benefits. And a whopping 74% are satisfied with their companies' IT training programs.



Continued from page 38

in 2003, Batt says that in his first week on the job, he was struck by the company's lack of rules and regulations. "I'd ask, 'What's the policy on such-and-such?' and the answer would be, 'We decided not to have a policy on that,' " he says. "There are very few prohibitions."

Batt drew on that relaxed approach and what he calls the "unbounded optimism" of home-building professionals and established a three-word mantra for IT to apply to all of its projects and activities: easy, fun and sustainable. "We frequently ask ourselves whether our projects are meeting those goals, and if not, how can we change that?" Batt says. Just last year, the group realized that it needed to increase its "fun" quotient after four years of high growth, so it started planning activities such as a two-floor indoor miniature golf tournament in its Michigan facility.

Flexibility also has to extend into work/life benefits. At Anheuser-Busch, 40% of the employees in Davis' group are taking advantage of some form of alternative schedule, whether working from home or working four 10-hour days. At Cornell, Talda is granted time during the workday to pursue an MBA in education. And McKeon joined Chubb in part because as her children got older, she wanted the flexibility to leave the office in the late afternoon if need be and resume her work again in the evening. "Here, as long as the work gets done, everyone's happy," she says.

Moving Up – Not On

But like the best families, companies that want employees to feel connected also have to be just as ready to let go when other opportunities call — or provide those opportunities themselves. That's why this year's Best Places offer healthy training and development benefits as well as access to interesting projects, and they pay close attention to matching staffers with roles that magnify their talents.

Cornell has seen staff mobility increase over the past three years, thanks to both an annual talent review meeting conducted by its senior management team and the fact that it now breaks out career development discussions from its performance reviews.

"We're focusing on staff members' individual strengths and helping them find roles where they will be most satisfied and successful," says Nancy van Orman, assistant to the vice president of Cornell IT. For instance, in 2003 only three staffers moved from one division of Cornell to another, but in 2006 that number increased to 21.

In his nine years at Anheuser-Busch, Davis has worked in materials management doing SAP configurations, in the wholesaler/marketing division and now in the Busch Entertainment unit. IT staffers can become familiar with other areas of the organization, from wholesaling to brewing, by attending talks in which speakers describe what they need from IT in order to be successful.

Retention is also encouraged by rewarding IT employees for their abilities rather than their tenure. "I'm very loyal, but I need to be challenged or I'll move on," admits Johnson. However, at Moffitt, "each project is like that new, exciting project, so I don't have to jump to the next client to keep it interesting," he says.

That's true not only because of the organization's pioneering cancer research, but also because of its merit-based promotion policies. "Moffitt promotes from within, but only if you're the right person, not because you've been there 20 years," Johnson says.

Case in point: When Martinez joined Moffitt, he met with everyone in IT to assess their skills and personalities and then moved people to where they'd excel in the organization. "I had one guy [assigned] to fix PCs, but he had a Ph.D. in biochemistry," he says. "Now he's helping to build the database for the biotech group."

Similarly, within a year of being hired at Chubb, McKeon quickly moved from an application management position to project manager, when the application she was managing required significant functionality enhancements. "As a result, I've become somewhat of a subject-matter expert in business process management and provide support to other business units as they explore BPM," she says.

Continuous Improvement

What unifies the companies on this year's list of Best Places to Work is the drive to do what it takes to be on the list next year as well. "We recognize that there's no finish line," says Anheuser-Busch's Castellano. "The worst thing we could do is get complacent, because people here have high expectations, and they should."

June Drewry, worldwide CIO at Chubb, has the same mind-set. She came out of retirement one and a half years ago to help the company groom its senior leadership team following the departure of the head of IT. She joined a group that was highly functional and — thanks to its federated organizational model — closely bonded with the business units it served. Many IT organizations might have stopped there, but when Drewry asked the business line CIOs what they'd want to improve, they said they wanted to strengthen their relationships across the business units.

To do that, Drewry got the company involved in the Society for Information Management's Regional Leadership Forum, a leadership development and training course. Last year, 30 mid- and high-level managers from various IT units attended the program together. According to McKeon, it was life-changing. "I now have literally 30 people who I can pick up the phone and reach out to when I'm in a bind, strictly based on the relationship we built going through that program together," she says.

Ties like these make Chubb a place worth going to every day for McKeon. "I've always said that if I'm in a position where I'm going to work for a paycheck, I'm in the wrong place," she says. "The pay is nice, but I need to come home at the end of the day and feel good about what I did."

Brandel is a Computerworld *contributing writer. Contact her at marybrandel @verizon.net.*

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MAKE A CUSTOMIZED LIST of this year's Best Places to Work, based on what's most important to you. Sort by region, training budgets and more. **Computerworld.com**

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SOURCES: COMPANY-SUBMITTED SURVEYS, COMPANY WEB SITES, HOOVERS.COM. SURVEY DATA WAS GATHERED IN JANUARY 2007.

How They Were Chosen

FOR THE 14TH CONSECUTIVE YEAR, *Computerworld* conducted a survey to identify the 100 best places to work for IT professionals.

In March 2006, *Computerworld* began accepting nominations. To qualify to complete the company survey, participating organizations, both public and private, had to have 2006 revenue of $100 million or greater and employ a minimum of 300 total employees in the U.S. and a minimum of 50 IT employees in the U.S.

Participants submitting nominations were asked to provide the name and contact information of an appropriate individual at their organization who was familiar with or had access to employment statistics and financial data, as well as information about benefits policies and programs for the IT department and the organization as a whole.

Mari Kuefe & Glen Fanning, Best Places program coordinators

In January 2007, contacts at the nominated companies received a 100-question survey asking about their organizations' average salary and bonus increases, the percentage of IT employees receiving promotions, IT staff turnover rates, training and development opportunities, and the percentage of women and minorities in IT staff and management positions. In addition, information was collected on how the organizations reward outstanding performance, how their retention programs are structured, and what benefits they offer, including elder and child care, flextime, and tuition reimbursement for college and technology certification courses.

All participating organizations were required to obtain feedback from their employees. Upon completion of the company survey, company representatives were e-mailed instructions on selecting a random sample of their U.S.-based full- and part-time IT staffs to fill out an employee survey. The responses to the survey went directly to a third-party research firm. Topics covered in the employee survey included satisfaction with training and development programs, base salary, bonuses, health benefits and work/life balance. In addition, employees were asked to rate morale in their IT departments and the importance of various benefits. They were also asked to rate the degree to which they agreed with a variety of statements related to subjects such as career growth and management's fair and equal treatment of employees.

A total of 27,038 IT employees responded to the employee survey from the final 100 companies selected.

The nomination survey, company survey and employee survey were all conducted via the Internet. The company and employee survey portions of the research ended in March 2007. In scoring the responses from the company and employee surveys, company results were weighted based on employees' importance ratings from the employee component. Approximately one-half of the total scoring system was based on employee responses, with the remainder based upon the survey of the company's benefits and other programs.

This year's survey process was managed by Michele Peoples of IDG Research.

	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
1 Quicken Loans Inc. www.quickenloans.com Livonia, Mich.	4,050 / 318 41% 19%	9%	8%	3	Celebrations at this online loan company are star-studded: Kid Rock performed at the 2006 holiday gala, and The Black Eyed Peas were featured performers at the company's 20th anniversary party. On "Ticket Window Thursdays," founder Dan Gilbert, who also owns the NBA's Cleveland Cavaliers, invites employees to travel to Cleveland to see the team in action. Employees and their children receive hand-signed birthday cards from the CEO.
2 University of Miami www.miami.edu Coral Gables, Fla.	10,156 / 307 34% 68%	10%	15%	8	A resort-grade location isn't the only benefit of working at this university, located just south of Miami. The IT department is currently in growth mode, with a 6.6% increase in staff size this year. Another big selling point: The university provides full tuition remission for employees and their dependents. In dollars and cents, that means an employee with two college-age dependents could be receiving tuition remission in excess of $62,000 per year.
3 Sharp HealthCare www.sharp.com San Diego	13,843 / 325 42% 32%	7%	5%	5	IT employees at this San Diego-based health care provider work on state-of-the-art technologies, including electronic medical records, digital radiology and cardiology imaging, wireless applications and biometrics. But food and fun are part of the equation, too: The company hosts annual summer picnics, Thanksgiving potluck meals and holiday lunches. Executives financially supplement these events to thank employees for their work.
4 The Capital Group Cos. www.capgroup.com Los Angeles	7,497 / 1,433 32% 46%	4%	8%	14	This global investment management firm has kept its IT annual turnover at a low 7% for several years, and IT workers average nine years with the company. IT employees work side by side with business managers and are encouraged to follow the path that makes the most sense for them, either in a technical specialty, a leadership role or project management. And money talks: In addition to base salary, IT workers are eligible to receive two annual performance-based bonuses.
5 The Mitre Corp. www.mitre.org McLean, Va.	6,244 / 307 34% 16%	5%	7%	6	This not-for-profit organization got its start in 1958 when several hundred employees from MIT's Lincoln Laboratories came together to create new technology for the Department of Defense. Now Mitre has 6,500 scientists, engineers and support specialists. This organization offers a bevy of work/life balance programs, including flextime, teleworking, part-time employment and job sharing.

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TALK TO CHUCK®

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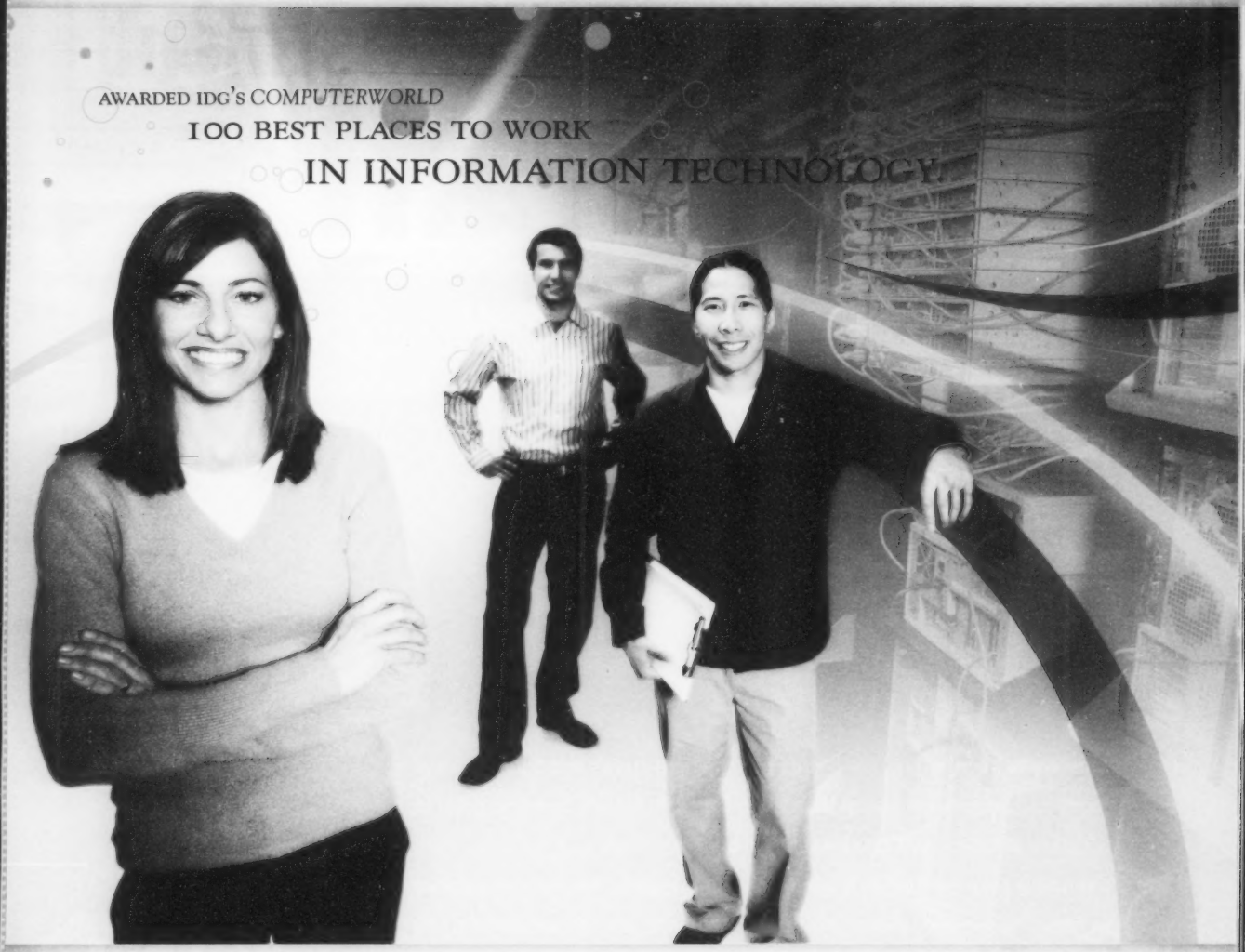

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2007

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	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
6 BAE Systems Inc. www.baesystems.com McLean, Va.	4,584 231 16% 18%	11%	10%	7	IT workers at this defense company (the fourth largest in the world) support advanced computing operations across the federal government and are directly involved with many of the most sophisticated agencies in delivering new technologies. For 2007, the company has earmarked more than $30 million for training and development, ranging from pure IT training to programs that focus on advanced leadership skills and communication skills.
7 General Mills Inc. www.generalmills.com Minneapolis	17,366 594 39% 12%	4%	20%	5	The company that brings you such popular brands as Green Giant and Betty Crocker offers its IT staff a Women in IS program that includes mentoring, sharing of best practices and community-building for female employees. A program called the IS Manager's Forum addresses topics that most concern IT managers, such as global support, project management and recruitment. Voluntary turnover has been at a low 4% for the past two years.
8 University of Pennsylvania www.upenn.edu Philadelphia	17,500 281 40% 31%	9%	6%	6	This top teaching and research institution prides itself on responsiveness: When a 9,000-person faculty/staff survey showed substantial demand for child care, Penn expanded its on-site child care center and lengthened the center's hours; it also introduced Baby Prep 101, a seminar series taught by Penn experts. And when a retirement seminar series proved so popular it exceeded capacity, the university ran the series a second time and added employee-suggested courses.
9 Anheuser-Busch Cos. www.anheuser-busch.com St. Louis	34,468 765 33% 9%	4%	15%	3	This brewer's most popular brands, Budweiser and Bud Light, have helped the company attain a U.S. market share of about 48%. The company offers employees a liberal vacation time policy: two weeks after one year of employment, three weeks after three years, four weeks after five years, five weeks after eight years, and six weeks after 10 years. Eligible employees receive two free cases of beer (or nonalcoholic Anheuser-Busch products) each month.
10 Fairfax County Public Schools www.fcps.edu Annandale, Va.	21,981 449 34% 31%	6%	6%	5	If you're interested in taking on a leadership role, the nation's 12th-largest school system is the place to be. The IT Leadership Development Cohort Program develops promising IT employees to take on leadership roles. Approximately 20 employees attend the one-year program, which includes 16 hours per month of formal classes on company time and 10 hours of projects on employee time. The IT group also has a host of rewards, including the "Going the Extra Mile" award.
11 Hilton Hotels Corp. www.hiltonworldwide.com Beverly Hills, Calif.	74,000 541 36% 33%	10%	42%	15	IT employees at this worldwide hotelier work with the latest in systems integration, CRM, business intelligence and property management technologies. One system, called OnQ, serves the company's hotels, corporate office, and reservations and customer care centers, as well as the customers and guests who use the hotels' Internet tools and self-service options. All employees are eligible for discounted room rates and spa packages at its 2,500 North American hotels.
12 SAS Institute Inc. www.sas.com Cary, N.C.	5,180 315 31% 14%	6%	12%	5	During lunch hours, most employees at this business intelligence software and services company can be found eating at one of three subsidized corporate cafeterias or working out at the free, on-site recreation and fitness center. Free healthy snacks and beverages are available in break rooms on every floor. The 52,000-square-foot gym is a state-of-the-art facility that includes a 17,000-square-foot natatorium with a 10-lane pool.
13 American Fidelity Assurance Co. www.afadvantage.com Oklahoma City, Okla.	1,466 137 34% 20%	6%	8%	5	This provider of voluntary supplemental life and health insurance works hard to keep IT and business working in concert. To build those relationships, regular meetings are held between the business units and the IT staff, with the purpose of discussing, prioritizing and monitoring key project initiatives. The average IT bonus last year was 13% of base salary. In 2007, that figure is expected to reach 26%.
14 Verizon Wireless www.verizonwireless.com Basking Ridge, N.J.	65,000 2,197 30% 34%	5%	9%	12	An employee intranet site at this wireless service provider was expanded in 2006, giving employees resources and links to confidentially assess their skills, explore business needs of the organization and develop career plans. A tool kit for managers was also expanded to include coaching and development tips and career discussion cases. The company, which serves almost 60 million customers nationwide, offers employees low-cost medical, dental and vision coverage.
15 Grant Thornton LLP www.grantthornton.com Chicago	5,410 164 30% 30%	8%	8%	7	Employee collaboration is a key principle at this global accounting firm, which was founded in 1924 by Alexander Richardson Grant. The IT group fosters teamwork by introducing cross-divisional personnel to one another through events and social gatherings. "State of IT" meetings are held via videoconference. Last year, a 360-degree feedback program for the IT management team was implemented to give staff a voice for input and provide managers with an opportunity to grow.
16 VHA Inc. www.vha.com Irving, Texas	1,262 100 24% 17%	7%	5%	6	The recognition and awards program at this health care alliance honors actions and deeds throughout the year – encouraging employees to recognize one another in the moment in meaningful ways. The Way to Go award can be given at any time, by any employee; it recognizes commitment to the company's values. Via the company intranet, an employee can recognize an individual or a team that has exemplified company values.
17 Philip Morris USA Inc. www.philipmorrisusa.com Richmond, Va.	11,239 445 41% 25%	6%	11%	10	A subsidiary of Altria Group Inc., Philip Morris is the company behind the Marlboro cigarette brand. Research and development are a major focuses for IT. A research and technology center now under construction will double the company's research space and feature state-of-the-art systems. In 2005, the company designed and implemented a business analyst certification program that is considered to be the equivalent of a project management certification.
18 Sutter Health www.sutterhealth.org Sacramento, Calif.	43,139 972 45% 27%	8%	12%	5	This network of hospitals and physicians in Northern California encourages its IT employees to join professional organizations to increase their professional standing and skill sets. A key technology initiative last year was eICU, which put cameras, clinical systems interfaces and alert buttons in 365 intensive care unit rooms, with two core hubs staffed with physicians and nurses to back up the ICU nurses around the clock.
19 DealerTrack Inc. www.dealertrack.com Lake Success, N.Y.	665 215 22% 38%	6%	20%	5	This provider of on-demand software for the automotive retail industry is all about staying connected. It uses the Internet to link car dealers with banks, finance companies, credit unions and other financing sources. The company works with more than 22,000 automotive dealers, including over 85% of all franchised dealers; more than 300 financing sources, including nine captive financing sources; and other providers of service and information to the automotive retail industry.
20 Chicago Mercantile Exchange www.cme.com Chicago	1,409 569 16% 36%	8%	18%	5	The largest financial exchange in the world and the first publicly traded financial exchange in the U.S., the CME had an average daily trading volume of 5.3 million contracts in 2006. The company clearly values innovation: The CME Center for Innovation creates and sponsors original programming that showcases innovation and creative thinking across industries. The CME also bestows cash and other rewards on employees who are issued U.S. patents.
21 Principal Financial Group Inc. www.principal.com Des Moines	13,164 1,503 36% 9%	6%	7%	3	This umbrella company for a group of financial services providers offers its employees job coaching, hands-on training classes, annual "development week" training, computer-based training, newsletters, lunchtime workshops and instructional video sessions. A company intranet offers information on classes. New employees are paired with mentors, who help guide them with training.

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_INFRASTRUCTURE LOG

_DAY 78: Our energy costs are staggering! We're spending more to power and cool the hardware than we did to buy it in the first place. We can't get enough power into our data center.

_It's too darn hot. Gil moved the entire data center to the Arctic Circle. This commute is ridiculous.

_DAY 81: I'm taking back control with IBM energy management solutions. IBM services helped us identify inefficiencies and change our entire approach to power and cooling. The IBM System z™ server's high utilization and unique design is très cool. We no longer have to feed the never-ending power appetite of our old, high-density environment. We've moved the data center back where it belongs.

_Gil doesn't want to hear about it. He says he's snow deaf.

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	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
22 Aflac Inc. www.aflac.com Columbus, Ga.	4,357 529 34% 25%	10%	5%	5	This insurance company, founded by brothers John, Paul and Bill Amos in 1955, holds an annual employee appreciation week to honor employees. It has rewards programs that recognize process improvement, as well as a profit-sharing bonus plan and a 401(k) plan with company contributions. The IT division purchased and implemented a new e-learning program in January 2006. Exceptional IT employees are rewarded with spot bonuses of up to $1,500.
23 Qualcomm Inc. www.qualcomm.com San Diego	9,501 796 22% 32%	8%	14%	4	IT employees at this wireless communications vendor are issued laptops with wireless broadband cards so they can work flexible hours or remotely. Financial rewards include bonuses and stock options, promotions and employee recognition awards. IT employees receive semiannual merit reviews, with the opportunity to earn a bonus or stock options at each review. Employees receive larger bonuses if the company exceeds its financial goals.
24 Securian Financial Group Inc. www.securian.com St. Paul, Minn.	2,400 398 42% 7%	7%	14%	12	Job security is a big deal at this financial services and insurance company. Securian, formerly known as Minnesota Mutual, has never laid off an IT worker. The majority of hiring is at the entry level, with the intent to train and groom workers for senior positions. A job-posting program lets IT workers see opportunities in other parts of the company. Other benefits include on-site child care, tickets to sporting events and concerts, gift cards, dinners and bonus time off.
25 Northwestern Mutual Financial Network www.nmfn.com Milwaukee, Wis.	5,038 1,107 37% 12%	4%	15%	4	IT staffers needn't apply for a new job to get a promotion at this life, disability, long-term care and health insurance provider. A five-level career path lets them earn promotions by expanding their technology knowledge. Networking and mentoring are lunchtime activities: The company offers a business lunch program at no cost to all employees and contract staff. The company budgeted more than $750,000 last year to recognize employees who devote extra effort to a project.
26 American Century Investments LLC www.americancentury.com Kansas City, Mo.	1,763 302 25% 8%	5%	8%	5	This health-minded company offers its workers medical, dental, vision, disability and voluntary long-term care insurance. Financial security programs include profit-sharing and 401(k) plans with a potential company contribution of up to 15% annually. A sabbatical program allows employees with seven years of service or more to take a month of paid time off – with no restrictions or requirements.
27 Monsanto Co. www.monsanto.com St. Louis	8,152 704 35% 25%	4%	5%	8	An office renovation is under way at this seed and biotechnology company, under the watchful eye of the IT department. The new space will feature a wireless environment, and it will be designed with flexibility, utility and collaboration in mind. Recognition opportunities for IT include the Incredible Talent award, which recognizes sustained excellent performance; and the Value Awards, which recognize IT professionals and teams that have contributed significant value to the business.
28 Booz Allen Hamilton Inc. www.boozallen.com McLean, Va.	16,815 224 38% 43%	11%	10%	10	Founded in 1914 by Edwin Booz, this global consulting firm is committed to corporate philanthropy and community service, and IT employees are part of that mission. The company's IT professionals mentor young IT professionals through a summer intern program and are involved in many charitable activities, including work on behalf of The Leukemia & Lymphoma Society. IT staffers are encouraged to work with educational groups and other nonprofit organizations.
29 Pricewaterhouse-Coopers www.pwc.com New York	30,161 1,474 31% 29%	9%	9%	5	Career development is a big priority at this Big Four accounting firm. Each IT employee has a group of co-workers who help guide him through his career. That group includes a supervisor, peers and a relationship leader. The relationship leader is a senior person in the company, usually outside the employee's reporting line, who serves as a long-term mentor and helps the employee develop both professionally and personally.
30 Marriott International Inc. www.marriott.com Washington	124,726 1,058 34% 33%	8%	10%	6	One of the world's leading hoteliers, Marriott operates or franchises more than 2,700 properties in more than 65 countries. In 2006, the IT department had a voluntary turnover rate of just 7.5%, and the average tenure of its IT staffers was nine years. As part of the Career Journey Plus program, senior managers retain responsibilities in their core area of expertise while assuming a second, complementary role.
31 First National of Nebraska Inc. www.firstnational.com Omaha	9,402 518 36% 13%	8%	10%	4	Work/life balance is a major focus at this financial services holding company. Employees can take advantage of wellness programs, an on-site child development center, on-site fitness centers, flexible work options, telecommuting options, health insurance benefits and community service opportunities. A new in-house program called Centers of Excellence allows the IT staff to train on and support certain types of software, including VMware, zLinux and WebSphere.
32 Raytheon Co. www.raytheon.com Waltham, Mass.	74,251 2,380 35% 15%	10%	17%	5	In a unique rotational program, IT workers at this U.S. defense contractor can transfer from one business unit to another for eight to 12 months. Plus, the company is staying a step ahead: It has a knowledge retention and transfer program to prepare for the loss of talent as a result of retirement and attrition. A new reverse-mentoring program pairs senior leaders with less-senior subordinate employees to enhance leadership development.
33 Comerica Bank www.comerica.com Auburn Hills, Mich.	11,270 736 42% 24%	5%	30%	6	Employees are kept in the loop at this bank holding company, which has about 460 branches. A corporate communications team provides regular updates via a monthly newsletter, twice-a-week e-mail updates and biannual in-person forums with the senior executive team. The IT department has established the Information Services Women's Network, which helps women in technology grow and develop their careers.
34 Norton Healthcare www.nortonhealthcare.com Louisville, Ky.	9,400 177 40% 8%	7%	7%	5	This health care provider operates five hospitals in Kentucky and manages seven health care clinics in Kentucky and southern Indiana. The company prides itself on providing a family-friendly environment for its workers. Special programs include flexible scheduling and telecommuting. IT workers earn bonuses for meeting project milestones and completing projects.
35 Tellabs Inc. www.tellabs.com Naperville, Ill.	2,719 198 29% 24%	8%	8%	5	Benefits at this telecommunications equipment provider include merit increases, a broad-based bonus program and stock incentive plans. The IT department has an additional recognition program through which the management team rewards teams and individuals. That program includes additional bonuses and rewards such as gift certificates. Team celebrations run the gamut, including wine tastings, team cooking classes, cruises and bowling.
36 Ernst & Young www.ey.com Lyndhurst, N.J.	25,865 1,126 28% 31%	6%	10%	3	At the country's third-largest accounting firm, employees can take advantage of flextime arrangements, elder care, backup child care, telecommuting options, tuition reimbursement, employee discount programs, full technology support, pretax spending accounts for dependent care and uncovered medical expenses, a referral bonus program and a concierge service. Each year, about 15% to 25% of employees receive cash awards that range from 5% to 10% of base salary.
37 Partners HealthCare System Inc. www.partners.org Wellesley, Mass.	4,500 1,151 41% 12%	8%	10%	6	Work/life programs at this Boston-based health care provider include flextime, mothers' rooms, and seminars on home-buying, first-time parenting and financial planning. The Personal Priority Program allows employees to receive up to a 50% reimbursement for certain types of expenses, such as gym memberships, adoptions, computer purchases, financial planning and dependent postsecondary tuition.

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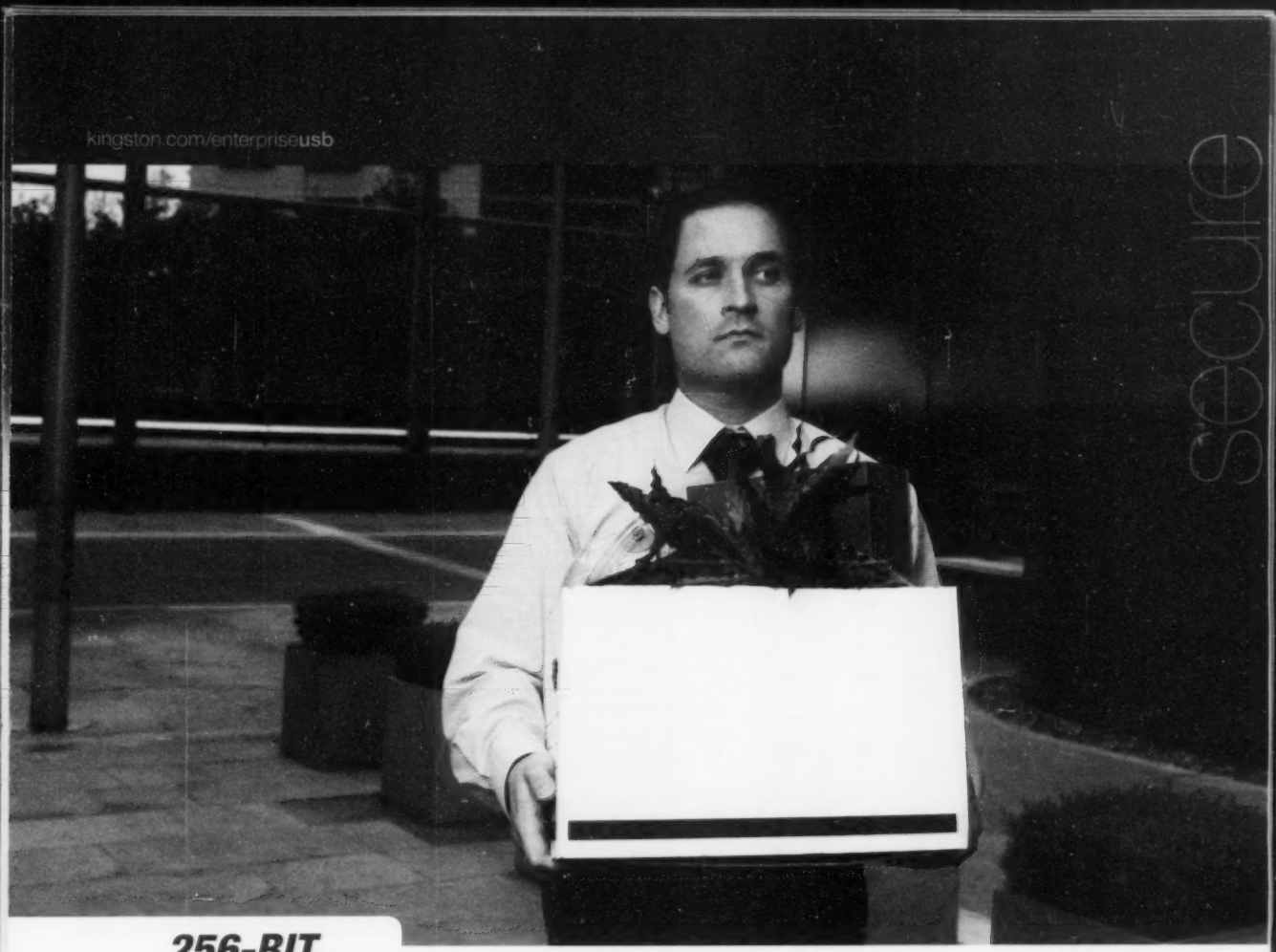

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Kingston TECHNOLOGY
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Employer	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
38 USinternetworking Inc. www.usi.com Annapolis, Md.	518 / 413 22% / 28%	21%	6%	5	Acquired by telecommunications giant AT&T in 2006, USinternetworking is a wholly owned subsidiary that provides hosted applications via the Internet for large companies. Almost 40% of employees have worked for the company for at least five years. An annual appraisal process measures employees' performance against the company's set of core values. A new program allows employees to recognize their colleagues throughout the year.
39 USAA www.usaa.com San Antonio	21,556 / 2,366 33% / 35%	9%	19%	6	This mutual insurance company, which primarily serves military families, has an innovation program through which employees can receive cash for great ideas. In 2006, employees took part in 244 on-site training courses and 1,978 online training courses. Employees are vested in the fully funded pension plan after five years of service and can retire as early as age 55. A built-in cost-of-living adjustment formula protects employees from inflation.
40 Cornell University www.cornell.edu Ithaca, N.Y.	376 / 346 26% / 7%	4%	10%	5	This Ivy League university, founded in 1865 by Ezra Cornell and Andrew Dickson White, budgets $2,500 per employee for development each year. Employees have access to Cornell's degree programs for free, and a new Technology Scholarship Program provides an extra $2,500 in funding for classes or conferences not within an employee's immediate technological area. A training group offers technical courses and certification programs on-site.
41 National Information Solutions Cooperative Inc. www.nisc.coop St. Louis	594 / 440 39% / 2%	8%	11%	10	This cooperative company provides billing services for the energy and telecommunications industries. One big benefit: A comprehensive medical plan, including vision insurance, is provided to all employees and their families at no cost. Bonuses include performance salary increases, plus discretionary and incentive bonuses. At the company's National IT Learning Center, employees and customers can get certified in the company's software products.
42 Memorial Health Services www.memorialcare.org Long Beach, Calif.	10,308 / 200 45% / 28%	2%	13%	2	The IT team at this hospital group in Southern California supports 200 applications on multiple platforms. IT staffers also work with multiple technologies, including voice over IP, radio frequency identification, virtual LANs, and wireless data and voice. The organization has continued to increase IT budgets annually across the board. Incumbent employees are always considered first for vacancies and new positions, with decisions about job offers based on performance.
43 Cummins Inc. www.cummins.com Columbus, Ind.	16,055 / 448 32% / 27%	11%	11%	5	This global power company offers domestic partner benefits to employees' partners who aren't legal spouses. Those benefits extend to both opposite-sex and same-sex domestic partners. Coverage includes complete health care, life insurance for spouses and dependents, a pension plan, medical insurance for retirees, leave for family matters that's on par with the Family and Medical Leave Act, adoption assistance and relocation assistance.
44 Southern Co. www.southernco.com Atlanta	25,888 / 996 30% / 20%	4%	8%	2	The IT Leadership Development Program continues to raise the bar on leadership development at this electricity distributor, one of the largest in the U.S. The two-year program is hosting its second class of employees. The first year of the program includes monthly classes, with curriculum ranging from speech classes to courses for first-line supervisors. The second year is dedicated to one-on-one mentoring from the IT senior leadership team. IT exclusively funds the program.
45 Discover Financial Services LLC www.discovercard.com Riverwoods, Ill.	13,013 / 1,372 35% / 27%	11%	13%	3	This business unit of investment bank Morgan Stanley is the issuer of Discover brand credit cards, which are carried by some 50 million people. IT employees work a 40-hour week on average, with flexible scheduling and summer hours available. The IT department supports just over 13,000 employees at 10 facilities in six states. New employees receive 25 days of paid time off to use at their discretion instead of designated sick, personal and vacation time.
46 Discovery Communications Inc.* www.discovery.com Silver Spring, Md.	3,676 / 334 28% / 36%	16%	10%	1	This media company counts the Discovery Channel cable network among its offerings. Discovery Communications cares about employee wellness. Its LifeWorks Strategies team offers programs that help employees integrate their professional responsibilities and personal goals. A full-service, on-site wellness center opened in late 2004. It is staffed with medical professionals serving as primary care physicians and offers a full range of medical services free of charge.

NOTE: *Since production of this issue began, Discovery Communications announced that it would close its retail stores. That move is expected to result in a 25% reduction in its overall workforce.

Best Large Companies

10,000 or more U.S. employees

ORGANIZATION	OVERALL RANK
1 University of Miami	2
2 Sharp HealthCare	3
3 General Mills Inc.	7
4 University of Pennsylvania	8
5 Anheuser-Busch Cos.	9
6 Fairfax County Public Schools	10
7 Hilton Hotels Corp.	11
8 Verizon Wireless	14
9 Philip Morris USA Inc.	17
10 Sutter Health	18
11 Principal Financial Group Inc.	21
12 Booz Allen Hamilton Inc.	28
13 PricewaterhouseCoopers	29
14 Marriott International Inc.	30
15 Raytheon Co.	32
16 Comerica Bank	33
17 Ernst & Young	36
18 USAA	39
19 Memorial Health Services	42
20 Cummins Inc.	43
21 Southern Co.	44
22 Discover Financial Services LLC	45
23 Hess Corp.	48
24 Paychex Inc.	49
25 State Farm Insurance Cos.	50
26 KPMG LLP	51
27 Edward D. Jones & Co.	52
28 Charles Schwab & Co.	53
29 Harrah's Entertainment Inc.	56
30 The Vanguard Group Inc.	60
31 HSBC North America Holdings Inc.	61
32 Novartis Pharmaceuticals Corp.	64
33 Pulte Homes Inc.	69
34 Apollo Group Inc.	73
35 Southern California Edison Co.	77
36 Corning Inc.	78
37 Publix Super Markets Inc.	81
38 U.S. Postal Service	83
39 United Parcel Service of America Inc.	84
40 Quest Diagnostics Inc.	85
41 J.B. Hunt Transport Services Inc.	87
42 Allstate Insurance Co.	89
43 Aramark Corp.	90
44 MIT	93
45 The Schwan Food Co.	96
46 Nationwide Mutual Insurance Co.	98
47 Deloitte & Touche USA LLP	99
48 Duke University Health System Inc.	100

Put Your IT Passion to Work:

THE MONSANTO EXPERIENCE

At Monsanto, we're passionate about using science and technology to make agriculture more productive. Through our innovations, we help farmers produce healthier foods, better animal feeds and more fiber, while also reducing agriculture's impact on our environment.

At Monsanto, we believe in –

INNOVATION

Advanced science and innovative technology are at the heart of our company. We are committed to developing science based solutions to make our farmer customers more productive and profitable.

AGRICULTURE

Making agriculture stronger helps people feel that they are making a difference by feeding the world while preserving the environment.

EXCELLENCE

People at Monsanto are driven to do extraordinary things and are dedicated to being the best in our industry.

GREAT WORKING RELATIONSHIPS

Monsanto is team based with highly qualified professionals sharing knowledge, creating a great place to work and allowing employees to take ownership for results.

We are seeking to add top talent nationwide in our Information Technology function. Talents being sought include knowledge and experience in the areas of SAP, JAVA, UNIX, Information Security and Project Management.

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2006

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2007

2007 ASUG Impact Award

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	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
47 Johnson County Community College www.jccc.edu Overland Park, Kan.	2,400 95 27% 11%	4%	3%	10	IT staffers at this 34,000-student community college are encouraged to participate in both their specific functional area and in other workgroups. For example, a staff member might lead a project in the morning, be a committee member after lunch and serve as a consulting voice in the afternoon. The quarterly Excel Award is given to employees who have enhanced the school through outstanding job performance; it comes with a $150 award.
48 Hess Corp. www.hess.com New York	13,000 275 24% 31%	4%	6%	4	IT is considered a competitive advantage at this oil and gas company, where IT professionals are involved in many different types of projects. The company operates in Denmark, Gabon, Norway, the U.K., the U.S., Indonesia, Thailand and other countries. Business units include IT professionals in strategy, planning and projects from the start. Flexible working arrangements are offered, including a nine-day, 80-hour schedule in some locations.
49 Paychex Inc. www.paychex.com Rochester, N.Y.	11,485 723 39% 5%	7%	36%	15	Listen up: This payroll accounting firm (the second largest in the U.S.) wants to hear what its employees have to say. In 2006, Paychex launched an employee survey covering topics such as communication, work environment, management, rewards and customer focus. The results were reviewed, and action plans were developed. There's fun, too: On Game Day, IT employees who hunt and fish bring in their best game dishes, and their colleagues taste them and vote for their favorites.
50 State Farm Insurance Cos. www.statefarm.com Bloomington, Ill.	67,182 5,611 38% 10%	4%	18%	8	This insurance company is headquartered in Bloomington, Ill., which was recently ranked in CNN Money's Top 100 Places to Live in the U.S. and is just a few hours' drive to Chicago, Indianapolis and St. Louis. Technology research is conducted on-site and at the company's new 6,000-square-foot suite on the campus of the University of Illinois. The IT group boasts more than 100 different technological skill sets and 15 primary roles.
51 KPMG LLP www.us.kpmg.com New York	21,504 931 28% 35%	9%	10%	5	The IT professionals at the smallest of the Big Four accounting firms are movers and shakers. IT people can transfer within the organization to other positions and specialty areas; "Hot Jobs" notices are sent monthly to all IT workers, and an internal job fair is held twice a year. The company's training budget increased 34% from fiscal year 2005 to more than $3,200 per capita in fiscal year 2006. The company also offers an array of work/life programs.
52 Edward D. Jones & Co. www.edwardjones.com St. Louis	31,451 1,083 37% 17%	9%	11%	3	Turnover in this financial services firm's IT group was less than 9% last year. The company is currently spending about $200 million to switch from satellite-based communications to high-speed, fiber-optic connections for some 10,000 U.S. branches. In this flat organization, there are no official job descriptions: Workers draft results-focused "responsibility statements" that define how they will contribute.
53 Charles Schwab & Co. www.schwab.com San Francisco	13,795 1,594 32% 34%	7%	5%	13	Employees at this financial services firm, which has 9,000 branch offices in the U.S., Canada and the U.K., are happy to give. In 2006, employee volunteerism shot up 81% from the previous year. In 2006, the Charles Schwab Foundation donated funds to more than 2,382 charitable organizations for a combined total of nearly $2.2 million in matched donations and contributions from employees and board members.
54 Raymond James Financial Inc. www.raymondjames.com St. Petersburg, Fla.	5,603 793 39% 14%	18%	16%	4	In July 2006, the IT department at this investment and financial planning services firm established a Communications Response Team to increase the effectiveness and timeliness of IT communications. IT leadership maintains an open-door policy and has a suggestion box to collect employees' ideas for improving IT processes. Employees reap the rewards of working at a financial services firm: They get a securities discount for trade transactions.
55 L.L.Bean Inc. www.llbean.com Freeport, Maine	4,906 269 40% 2%	4%	10%	5	L.L.Bean is getting as big as the great outdoors. Growth at this outdoor apparel maker has resulted in a 24% increase in year-round employees. At this family-owned company, employees receive a 40% discount on most active gear and can borrow equipment like tents, backpacks, boats and snowshoes. Exempt employees are eligible for three to five Outdoor Experience Days to participate in activities such as kayaking, hiking, camping and cycling.
56 Harrah's Entertainment Inc. www.harrahs.com Las Vegas	100,000 456 37% 27%	13%	10%	15	This gaming company recently integrated the Caesars casinos, effectively doubling its size in terms of revenue, employees and locations. That nine-month merger project integrated the people, processes and systems of 13 properties and culminated in a series of celebratory events. In 2006, Harrah's provided an average of 65 hours of training per employee across the entire organization.
57 Northern Trust Corp. www.northerntrust.com Chicago	7,501 973 34% 31%	5%	13%	5	Ready to travel the world? This asset management, asset servicing and banking firm has offices on three continents in 13 international locations. Increasingly, IT staff members in the U.S. are being asked to consider short- and long-term assignments overseas, in locations such as India, Ireland, Singapore and Guernsey. In 2006, the company examined all IT job titles and descriptions, adding new jobs and enhancing career development.

Best Medium-Size Companies

2,500 to 9,999 U.S. employees

ORGANIZATION	OVERALL RANK
1 Quicken Loans Inc.	1
2 The Capital Group Cos.	4
3 The Mitre Corp.	5
4 BAE Systems Inc.	6
5 SAS Institute Inc.	12
6 Grant Thornton LLP	15
7 Aflac Inc.	22
8 Qualcomm Inc.	23
9 Northwestern Mutual Financial Network	25
10 Monsanto Co.	27
11 First National of Nebraska Inc.	31
12 Norton Healthcare	34
13 Tellabs Inc.	35
14 Partners HealthCare System Inc.	37
15 Discovery Communications Inc.	46
16 Raymond James Financial Inc.	54
17 L.L.Bean Inc.	55
18 Northern Trust Corp.	57
19 CDW Corp.	58
20 Cerner Corp.	59
21 Palmetto Health	62
22 The Chubb Corp.	63
23 Miami Dade College	65
24 American Family Insurance Group	66
25 Temple University	67
26 H. Lee Moffitt Cancer Center & Research Institute	68
27 AmTrust Bank	70
28 Total System Services Inc.	71
29 Applera Corp.	74
30 Acxiom Corp.	75
31 Constellation Energy Group Inc.	80
32 CNA Financial Corp.	88
33 Creighton University	95

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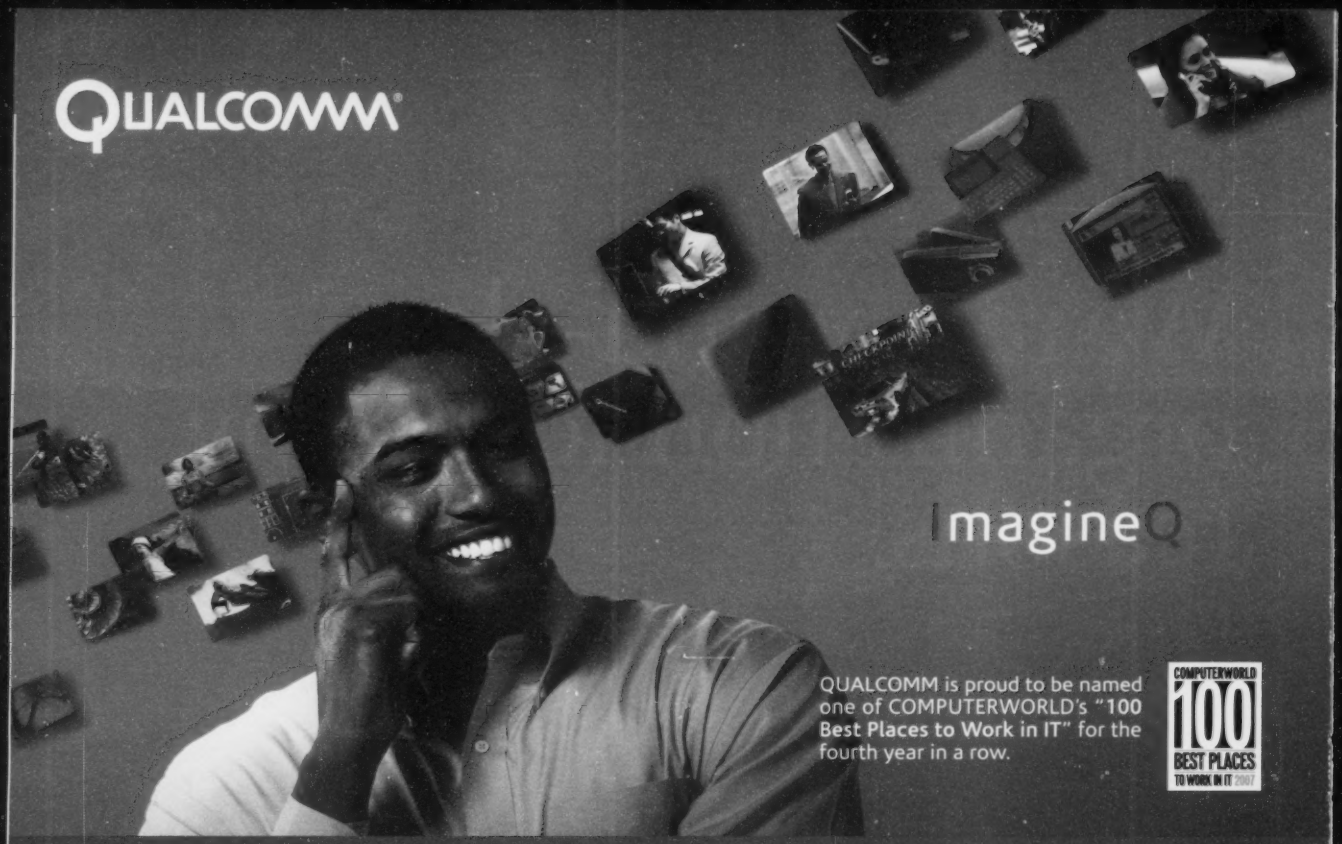
COMPUTERWORLD 100 BEST PLACES TO WORK IN IT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COMPUTERWORLD
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BEST PLACES
TO WORK IN IT 2007

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- EDA Applications
- Project Management
- Networking & IT Security
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Equal Opportunity Employer

	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
58 CDW Corp. www.cdw.com Vernon Hills, Ill.	4,600 217 24% 23%	17%	12%	6	In 2006, the IT department of this computer products reseller created the REACH (Rewarding Excellence, Achievements, Commitments and Helping others) employee recognition program. The REACH program includes Above and Beyond awards, cash awards given to workers based on nominations from a supervisor or manager. IT workers are allowed to work remotely from home one day a week on schedules approved by their managers.
59 Cerner Corp. www.cerner.com Kansas City, Mo.	6,364 4,468 35% 16%	13%	30%	14	A promote-from-within philosophy at this clinical and administrative information systems provider opens up many avenues for career growth and development in both technical and management roles. In 2006, 19% of workers transferred to new careers within the company. On an ACE (Advancing Conversion Excellence) trip, workers travel to a client site and support end users during a software conversion.
60 The Vanguard Group Inc. www.vanguard.com Valley Forge, Pa.	11,128 2,567 30% 27%	4%	6%	5	Professional growth includes hands-on learning opportunities: This financial services firm manages large custom development projects – representing 80% of the development budget – that are completed in-house. Plus, there are specialized learning maps tailored for every IT position and more than 1,800 IT-specific classroom- and computer-based courses. A new development tool, the Vanguard eCareerNavigator, allows employees to assess their strengths and talents.
61 HSBC North America Holdings Inc. www.hsbcusa.com Prospect Heights, Ill.	49,910 3,572 33% 30%	7%	8%	7	Benefits packages at this financial services company include health and work/life balance programs. New hires are eligible to contribute to their 401(k) accounts after 30 days of employment. After one year of service, the company matches 3% on the first 1% of contribution, up to a 6% dollar-for-dollar match. Employees are also given an opportunity to take on roles to stretch and expand their knowledge and skills in one of the company's diverse business areas.
62 Palmetto Health www.palmettohealth.org Columbia, S.C.	9,216 145 48% 17%	10%	11%	8	Employees at this health care services company enjoy a "casual all the time" dress code. Through the Bright Ideas program, employees offer ideas for saving money, improving patient safety, creating efficiencies or improving employee morale. Each submitted idea is reviewed, and ideas are implemented whenever possible. Employees are recognized via e-mail and employee forums and rewarded with gifts and annual prizes for the best suggestions in each category.
63 The Chubb Corp. www.chubb.com Warren, N.J.	8,200 964 54% 19%	5%	7%	5	In the pay-for-performance model, employees at this insurance firm who exceed their goals are considered outstanding performers and rewarded with higher merit increases and a larger share of the department's bonus pool. Managers also have a discretionary bonus pool to immediately reward employees for outstanding contributions to specific projects. The company hosts frequent sessions called TechTalk/BizTalk that bring IT staff together to discuss topics at a granular level.
64 Novartis Pharmaceuticals Corp. www.pharma.us.novartis.com East Hanover, N.J.	12,715 400 32% 28%	9%	12%	10	This pharmaceutical company, a subsidiary of Swiss firm Novartis AG, offers telecommuting, flexible workdays and job sharing. An IT Diversity Action Team has, among other things, developed a Web site to keep the IT community informed about diversity-related activities, rolled out an IT survey to identify what's working and areas of opportunity, and initiated a diversity and inclusion contest to drive traffic to the Web site.
65 Miami Dade College www.mdc.edu Miami	5,648 303 33% 79%	30%	6%	2	President George W. Bush was the commencement speaker this year at Miami Dade, one of the nation's largest colleges. Recent IT projects include a multibillion-record database conversion and the design of a complete data center storage infrastructure. Employee recognition programs offer opportunities for peer recognition and monetary compensation. The college offers tuition waivers, reimbursements and higher-education discounts at local state universities.
66 American Family Insurance Group www.amfam.com Madison, Wis.	8,130 1,054 35% 8%	7%	7%	9	This insurance company's Diversity and Inclusion Committee works to generate office-specific events and programs that align with the company's efforts to create a diverse workforce. In late 2005, the executive vice presidents formed the Executive Diversity Champions Committee to monitor overall corporate diversity efforts and results, including expectations for company management and the impact of diversity on every business initiative.
67 Temple University www.temple.edu Philadelphia	5,487 245 32% 36%	6%	3%	6	With college tuitions soaring, here's a perk worth noting: Employees pay no tuition for any undergraduate or graduate programs at this top-rated university, their spouses receive half off all tuition, and children pay no tuition for up to 10 semesters of undergraduate study. Many IT employees have taken advantage: Several have recently completed Ph.D. programs, and many others are pursuing or have completed master's or bachelor's degree programs.
68 H. Lee Moffitt Cancer Center & Research Institute www.moffitt.org Tampa, Fla.	3,000 176 33% 30%	17%	19%	3	Part of the elite National Cancer Institute Comprehensive Cancer Centers, Moffitt offers its employees an on-site child care facility, medical benefits, dental coverage, life and long-term disability insurance, tuition assistance, a pension plan, flexible work hours and a 403(b) plan. The organization also employs a full-time technology training staff and contracts with major training organizations.
69 Pulte Homes Inc. www.pulte.com Bloomfield Hills, Mich.	12,000 272 29% 18%	19%	13%	6	Founded by Bill Pulte in 1950, this national home builder offers complimentary lunch at its corporate headquarters. Employees are encouraged to participate in community outreach efforts of their own choice, and the company provides all full-time salaried employees with two paid days off per year for volunteer efforts. Many departments coordinate charitable giving or charitable outreach efforts, participating as a group in activities such as Habitat for Humanity.
70 AmTrust Bank www.amtrust.com Cleveland	2,567 275 25% 21%	18%	14%	7	This Midwest bank, with more than 50 branches and loan offices, changed its corporate name from Ohio Savings Bank in April. The company keeps the average workweek for its IT workers at 40 to 45 hours, with monthly overtime pay given to salaried workers who work more than 45 hours per week on average. The company also offers flextime and part-time hours. Many employees are given the opportunity to work from home.
71 Total System Services Inc. www.tsys.com Columbus, Ga.	7,000 2,622 40% 26%	15%	20%	5	Training is a big focus at this credit card transaction processor, a subsidiary of Synovus Financial Corp. Technical skills classes are offered both in-house and externally, and the company offers tuition assistance for undergraduate and graduate degrees in various IT and business fields. Corporate training classes on leadership and communication skills are offered to all employees. The company also contributes to profit-sharing, money-purchase pension and 401(k) plans.
72 Penn National Insurance www.pennnationalinsurance.com Harrisburg, Pa.	842 107 48% 4%	5%	7%	6	Founded in 1919 by a farmer's association, this insurance firm now does business in nine states. The company recently developed a multidivisional governance committee to set priorities for and monitor the progress of technology projects. User representatives act as senior sponsors of all IT projects, and client staff are integral members of project teams. In 2005, the IT group rewrote and re-evaluated all positions and created new job descriptions and performance objectives.
73 Apollo Group Inc. www.apollogrp.edu Phoenix	14,000 1,030 18% 12%	3%	20%	10	This parent company of the University of Phoenix, Axia College, the College for Financial Planning, the Institute for Professional Development and Western International University this year merged its multiple IT departments into one collaborative unit, tripling its size. IT employees participate in team-building events and take part in efforts to support various causes, such as a drive to collect contributions to Toys for Tots and Christmas Angels.

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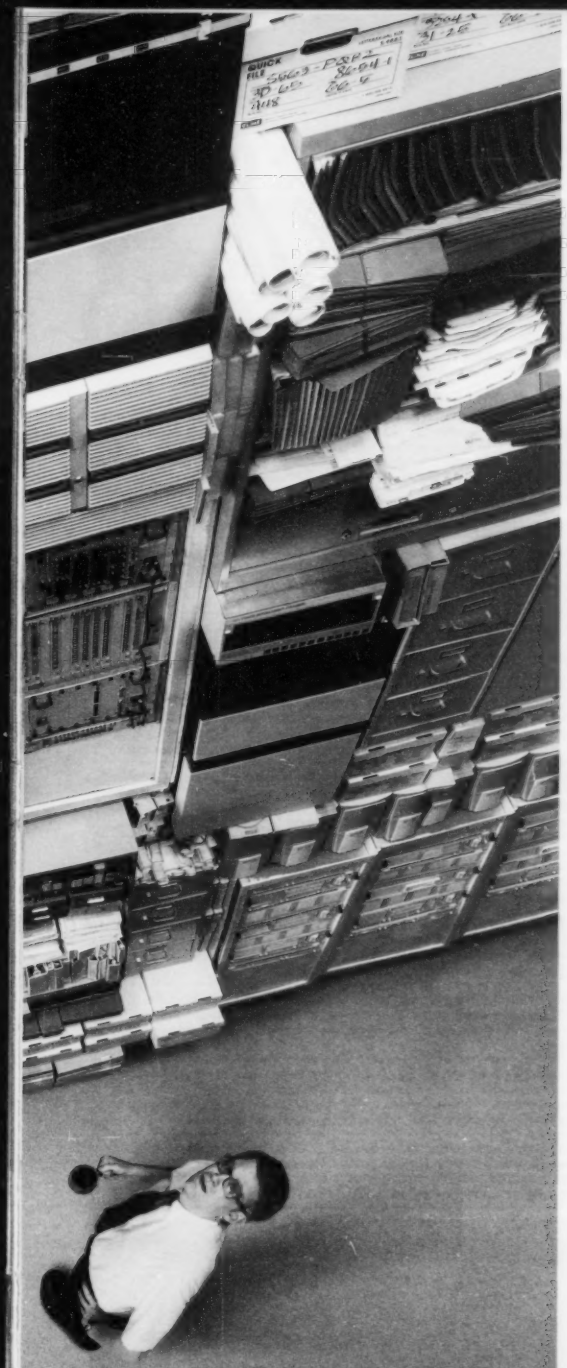

Information Management

_INFRASTRUCTURE LOG

_DAY 53: We're flooded with information. Data. E-mails. Web content. Video. It's trapped in unconnected systems. It's practically inaccessible. We need to do something.

_Gil needs help finding the right info, but I specifically listed "fear of heights" as a weakness during my last review.

_DAY 54: The answer: IBM solutions for leveraging information. They can help us build a high-performance infrastructure to bring info together, up and down the stack. IBM middleware consolidates critical structured and unstructured info across the silos for a single, unified view. IBM servers and storage give us virtualization for improved utilization.

_Now we can make better decisions with our info. I feel so much more grounded now.

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	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
74 Applera Corp. www.applera.com Norwalk, Conn.	5,251 / 165 19% / 48%	14%	11%	5	This instrumentation systems company, which makes software and services for the life sciences community, offers the services of a health advocate to all eligible employees, including spouses, children, parents and parents-in-law. The company also offers an annual bonus program based on goals set with employees' managers at the beginning of the year. That bonus is in addition to merit and promotional pay increases offered to qualifying employees.
75 Acxiom Corp. www.acxiom.com Little Rock, Ark.	5,596 / 2,751 28% / 21%	5%	5%	5	This global company, which develops software for direct marketing and customer relationship management, is currently migrating its internal processing from mainframes and servers to a grid of high-end PCs networked together in a massively parallel computing environment. Acxiom IT professionals have been writing the operating system for the grid. Two percent of total payroll, or about $6 million, is allotted for merit awards for notable performance.
76 Commonwealth Financial Network www.commonwealth.com Waltham, Mass.	403 / 83 23% / 8%	13%	21%	35	After three years of service, employees at this financial services company are eligible to rent vacation homes owned by the company's CEO for private use. Their choices include properties in Sunday River, N.H., West Palm Beach, Fla., and Key Biscayne, Fla. Each employee is eligible to receive a year-end bonus based on the company's performance in service, net operating margin and revenue growth. Employees are also eligible to receive yearly merit increases.
77 Southern California Edison Co. www.sce.com Rosemead, Calif.	15,047 / 1,163 31% / 53%	5%	23%	6	This utility company, one of the largest in California, has developed a new program known as the IT People Strategy, which emphasizes leadership, succession and workforce planning. As part of this program, top-level management assessments help identify and develop employees who are good candidates to fill executive positions when they become vacant. Senior managers and supervisors also take part in IT leadership off-site meetings.
78 Corning Inc. www.corning.com Corning, N.Y.	26,000 / 418 34% / 13%	3%	23%	4	IT employees at this global company, which manufactures optical fiber and cable products, routinely work with individuals from a wide variety of cultures. Through the company's career development system, employees are guided toward work assignments that provide specific learning and growth opportunities and prepare them for future roles. Corning Learning Central is an online connection to internal and external courses on topics such as business, technology and leadership.
79 National Rural Electric Cooperative Association www.nreca.coop Arlington, Va.	719 / 130 25% / 28%	8%	12%	9	IT workers at this company, which represents consumer-owned power cooperatives, are ready to work just about anywhere. Workers are equipped with laptop computers, multiple flat-screen monitors, multiple test and development computers and servers, wireless handheld devices, high-speed VPN connections and more. Excellence awards of up to $500 in gift cards are given to individuals and teams, with no limit on the number of awards an employee can receive.
80 Constellation Energy Group Inc. www.constellation.com Baltimore	9,681 / 639 26% / 25%	9%	8%	2	On average, 10% of IT employees at this power generator, which distributes electricity and natural gas in central Maryland through Baltimore Gas and Electric Co., are moved to new positions within IT and the business each year. The company offers a work/life program that includes disease management, lifestyle management, life event management, a national fitness network, long-term care insurance, and auto and home insurance at discounted group rates.
81 Publix Super Markets Inc www.publix.com Lakeland, Fla.	142,000 / 620 30% / 9%	12%	16%	13	Executives at this supermarket, the biggest privately owned market chain in the U.S., serve on steering committees for high-priority IT efforts. An open-door policy encourages staffers to meet with any manager or executive to discuss issues or ideas. Employees tend to stick around: More than 37% of IT workers have been with the company for 10 years or more. In 2005, the company paid more than $59 million to employees in the form of holiday bonuses.
82 Kansas City Power & Light Co. www.kcpl.com Kansas City, Mo.	2,174 / 129 40% / 14%	21%	13%	9	This subsidiary of Great Plains Energy Inc. serves about 500,000 electricity customers in western Missouri and eastern Kansas. The company offers a flexible benefits package that includes a 401(k) plan and a pension plan. Employees are encouraged to volunteer in the community through corporate-sponsored activities. In fact, the company donates an employee for full-time participation in the local United Way campaign as a "loaned executive."
83 U.S. Postal Service www.usps.gov Washington	796,199 / 1,293 34% / 35%	6%	6%	5	The IT department for the country's mail service supports more than 335,000 users, 175,000 desktop computers, 650 national applications and 73,000 point-of-sale workstations. Plus, it manages the 1.5 billion annual visits to the USPS Web site, which generate more than $425.7 million in sales. Tracking and rewarding of employee performance are done via a suite of Web-enabled systems.
84 United Parcel Service of America Inc. www.ups.com Atlanta	360,600 / 4,829 28% / 30%	6%	8%	4	This package delivery company offers employees opportunities for special assignments so they can learn on the job; a formalized mentoring program; a customized in-house Dale Carnegie program; and two-week "corporate schools," which offer supervisors, middle managers and senior managers learning opportunities in multiple cities throughout the year. In 2006, UPS IT employees donated a total of more than 41,000 hours to their communities.
85 Quest Diagnostics Inc. www.questdiagnostics.com Teterboro, N.J.	42,000 / 1,888 39% / 26%	8%	11%	4	Flexible schedules are a hallmark at this clinical laboratory, which provides diagnostic services to physicians and patients around the clock. Most employees work the first shift and can start their workday as early as 6 a.m. or as late as 9 a.m. The majority of IT employees are given laptops with VPN connectivity and broadband, DSL or cable access, allowing them to work from home. A wellness program called the Healthy Quest initiative includes free diagnostic screenings.

Best Small Companies

Fewer than 2,500 U.S. employees

ORGANIZATION	OVERALL RANK
1* American Fidelity Assurance Co.	13
2 VHA Inc.	16
3 DealerTrack Inc.	19
4 Chicago Mercantile Exchange	20
5 Securian Financial Group Inc.	24
6 American Century Investments LLC	26
7 USinternetworking Inc.	38
8 Cornell University	40
9 National Information Solutions Cooperative Inc.	41
10 Johnson County Community College	47
11 Penn National Insurance	72
12 Commonwealth Financial Network	76
13 National Rural Electric Cooperative Association	79
14 Kansas City Power & Light Co.	82
15 OCLC Online Computer Library Center Inc.	86
16 The Reader's Digest Association Inc.	91
17 Antares Management Solutions Inc.	92
18 Englewood Hospital and Medical Center	94
19 Informatica Corp.	97

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	Total Employees / Employees in IT / Women in IT / Minorities in IT	IT employee turnover in 2006	IT employee promotions in 2006	Training days/IT employee 2006	Why it's one of the best.
86 OCLC Online Computer Library Center Inc. www.oclc.org Dublin, Ohio	1,023 377 28% 14%	10%	3%	4	Alternative scheduling options at this nonprofit computer library service and research organization include flexible hours, compressed workweeks, reduced work hours, job sharing and telecommuting. Employee benefits include the OCLC Retirement Plan, life insurance plans and paid time off. An on-site fitness center features state-of-the-art equipment and basketball and racquetball courts; it also offers exercise and wellness programs.
87 J.B. Hunt Transport Services Inc. www.jbhunt.com Lowell, Ark.	17,146 309 29% 22%	7%	18%	9	A quarterly bonus program allows IT employees at this freight transportation provider to directly benefit when technology projects improve earnings per share. The IT department also knows how to let loose, with annual cardboard boat races, cooking contests and a special event called October-feast. The department is involved in supporting various charities, with at least three IT workers serving on the boards of local nonprofit organizations.
88 CNA Financial Corp. www.cna.com Chicago	8,077 1,146 34% 31%	12%	7%	5	This umbrella insurance company, which includes Continental Casualty Co. and Continental Assurance Co., offers tuition reimbursement and reimburses employees for the money they spend on technology certifications and continuing education. Employees are encouraged to help one another; The company offers formal and informal mentoring programs and supports employees partnering with colleagues in other IT areas to learn new skills on the job.
89 Allstate Insurance Co. www.allstate.com Northbrook, Ill.	35,424 3,725 43% 30%	21%	6%	15	Employee wellness is a priority at this insurance provider. The company offers a variety of fitness programs, running clubs, and smoking-cessation and weight-loss groups. Employees can participate in fitness walks and health fairs and get discounts on health club memberships. Allstate provides its employees with an array of work/life programs, including day care, banking, photo-finishing and dry cleaning services, as well as Weight Watchers programs and on-site oil changes.
90 Aramark Corp. www.aramark.com Philadelphia	165,000 505 30% 23%	14%	7%	7	With more than 240,000 employees in 18 countries serving thousands of client locations every day, this food service and uniform provider offers opportunities for employees to travel, expand their areas of expertise and gain exposure to other industries. Employees meet with their managers to create individual performance plans, which are reviewed at least annually and are used as a springboard for discussions about personal development and career goals.
91 The Reader's Digest Association Inc. www.rd.com Pleasantville, N.Y.	2,400 146 8% 8%	5%	15%	5	This publisher of the nation's No. 1 general interest magazine, *Reader's Digest*, rewards employee success financially and with promotions. Fun activities include cook-offs, ball game events and trips. The IT culture allows for flexibility; many IT staffers work at home on certain days, take breaks to go to the gym, and take advantage of other perks like 25-cent coffee, a cafeteria and a staff art gallery. At monthly meetings, business people speak with IT about current projects.
92 Antares Management Solutions Inc. www.antaressolutions.com Westlake, Ohio	523 403 35% 13%	8%	12%	7	A division of Medical Mutual Services, this company sells business process and application hosting services to the life and health insurance industries. Employee benefits include health, dental, vision and prescription drug coverage, as well as flexible spending accounts and retirement plans. Other perks include free parking at most facilities, a casual dress code, discounts at local retailers and amusement sites, and on-site banking at some locations.
93 MIT www.mit.edu Cambridge, Mass.	10,700 275 36% 17%	8%	8%	2	Prized for its science and engineering expertise, this university's calendar is packed with readings and lectures, innovative art exhibits, concerts, plays and films. MIT employees are also encouraged to express their creative side through programs like Artists Behind the Desk and courses at the Student Art Association and Glass Lab. MIT fosters close ties with its home city of Cambridge, Mass. – IT initiatives include helping the city build a wireless network.
94 Englewood Hospital and Medical Center www.englewoodhospital.com Englewood, N.J.	2,400 54 54% 28%	10%	10%	5	Founded in 1890, this 550-bed acute-care hospital promotes flexibility in work schedules for its employees. Also, managers believe in promoting from within the department. The center recently participated in the Microsoft Vista and Office 2007 early adopters program. Englewood has programs to recognize employees' length of service in five-year intervals. IT training opportunities include in-house workshops and Web-based classes.
95 Creighton University www.creighton.edu Omaha	3,000 94 32% 11%	1%	5%	7	Employees and their family members get deep discounts on tuition at this Jesuit Catholic university. Creighton offers its workers a fitness center, on-campus child care, discounted dental and health services at the university medical center, spiritual resources for people of all faiths and discounted admission to its cultural and athletic events. Employees also get a discount at the campus bookstore and free access to campus libraries.
96 The Schwan Food Co. www.theschwanfoodcompany.com Marshall, Minn.	22,000 305 32% 5%	11%	28%	10	One of the top frozen pizza makers in the U.S., Schwann is also known for its food home delivery service. The company's new Get Healthy program was designed to help employees maintain healthy lifestyles by increasing their awareness of health-related issues and giving them the tools they need to reach their health goals. A third-party vendor administers the program to ensure employee confidentiality.
97 Informatica Corp. www.informatica.com Redwood City, Calif.	708 56 25% 43%	2%	15%	14	Employees at this software maker set their own career objectives and work with their managers to achieve them. Few IT employees feel a need to leave: The IT department had a turnover rate of just 1.7% in 2006. All employees have formal monthly one-on-one meetings with their managers and quarterly skip-level one-on-ones to ensure quality management. Each manager is assigned a professional coach.
98 Nationwide Mutual Insurance Co. www.nationwide.com Columbus, Ohio	37,435 5,659 38% 18%	7%	16%	7	The Alternative Workplace Solutions program at this insurance company enables employees to work nontraditional schedules in locations other than the office. Choices include telecommuting, a mobile office plan, job sharing, compressed workweeks and flextime. Employees with one year of service who meet certain eligibility requirements can receive adoption assistance of up to $2,000 per adopted child per family, plus paid time off up to five days.
99 Deloitte & Touche USA LLP www.deloitte.com New York	36,222 1,002 28% 26%	12%	8%	4	This financial services firm (the U.S. arm of Deloitte Touche Tohmatsu) believes in the benefits of flexible work schedules. The company's Flexibility and Choice initiative offers employees scheduling options that promote work/life balance. Internal surveys show that most employees feel they are working a flexible schedule. On monthly "Fuel-up Fridays," four hours are set aside for each IT employee to take part in professional development activities.
100 Duke University Health System Inc. www.dukehealth.org Durham, N.C.	20,000 536 38% 23%	6%	5%	2	IT employees at this health care organization are offered a bevy of benefits, including health, dental and vision care plans, pharmacy benefits, retirement plans, life insurance, disability insurance, reimbursement accounts and tuition assistance. Long-term care and personal casualty insurance are also available. The organization also provides flexible work options such as nontraditional work hours and/or job structures, as well as the opportunity to work in locations other than the office.

SOURCES: Company-submitted surveys, company Web sites, Hoovers.com. Survey data was gathered in January 2007.

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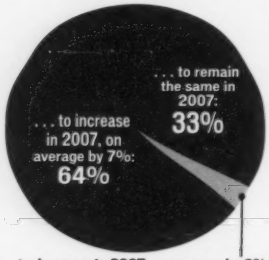
Statistics of Note

SOURCE: THE 100 BEST PLACES TO WORK IN IT 2007 COMPANY SURVEYS

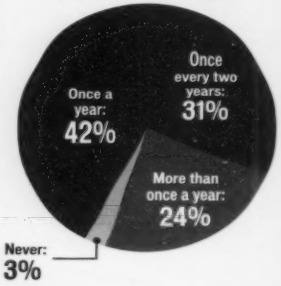
HIRING FORECAST

Percentage of companies that expect the number of U.S.-based IT staffers...



FORMALIZED FEEDBACK

How often does your company survey IT staffers about job satisfaction?



TOP FIVE BENEFITS OFFERED

Highest percentage of companies that offer:

Health insurance	100%
Paid vacations	100%
401(k)/403(b) plan	100%
Flexible hours	99%
Pretax programs for uncovered medical expenses	99%

BOTTOM FIVE BENEFITS OFFERED

Lowest percentage of companies that offer:

On-site child care	31%
Backup child care	30%
On-site concierge	25%
Company-subsidized child care	24%
Paid sabbaticals	18%

TOP FIVE RETENTION METHODS

Competitive benefits	100%
Competitive salaries	99%
Work/life balance	99%
Flexible work hours	98%
Tuition reimbursement	98%

TOP FIVE COMPANY-SPONSORED ACTIVITIES

Company gatherings (company picnics, holiday parties)	100%
Personal/wellness development opportunities	99%
Open forums with company management	98%
Support for community service	96%
Community/team building	95%

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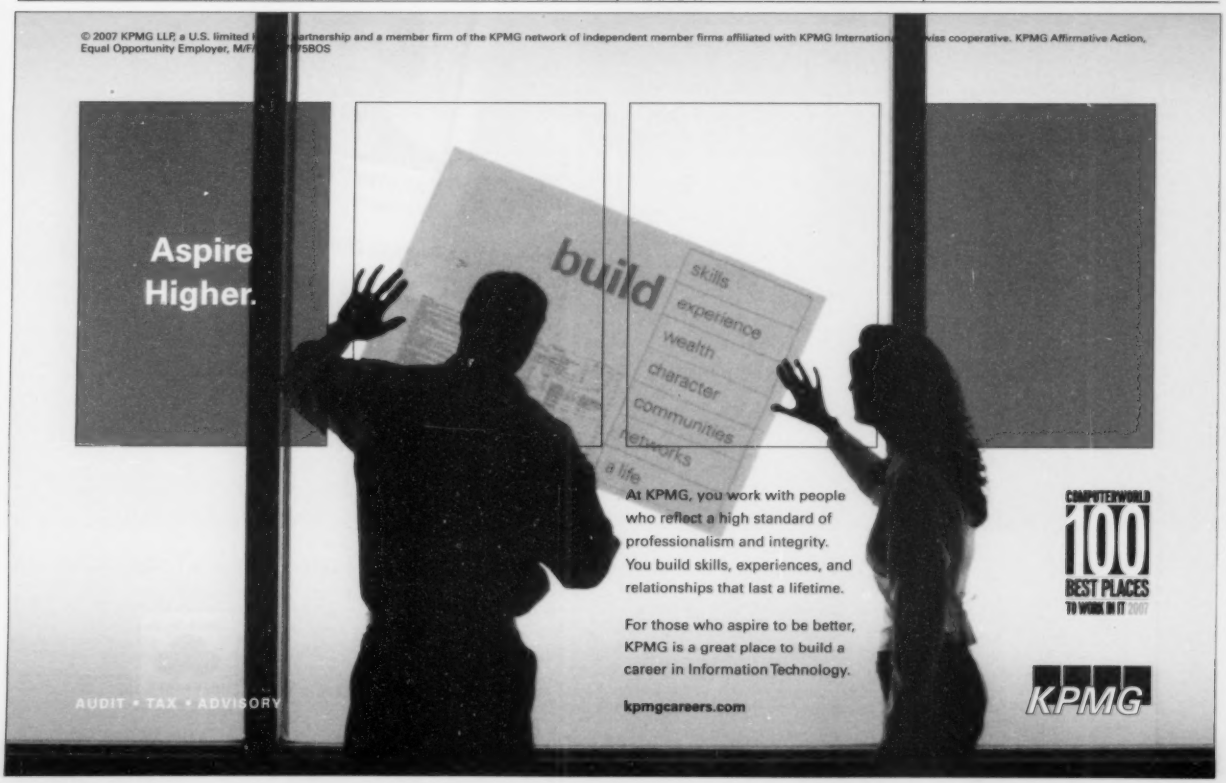
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character
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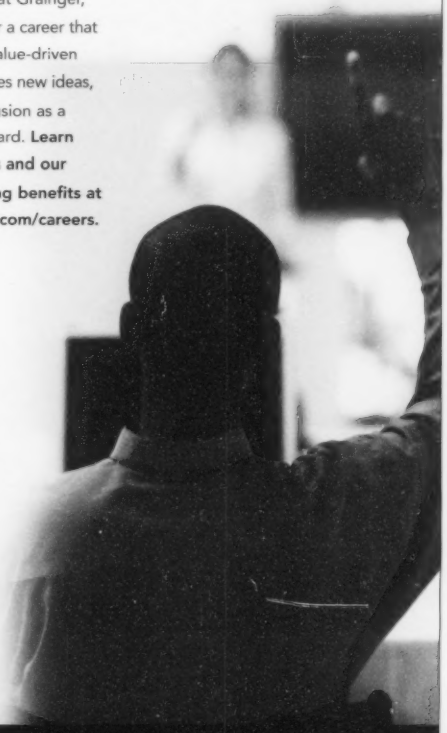

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2006

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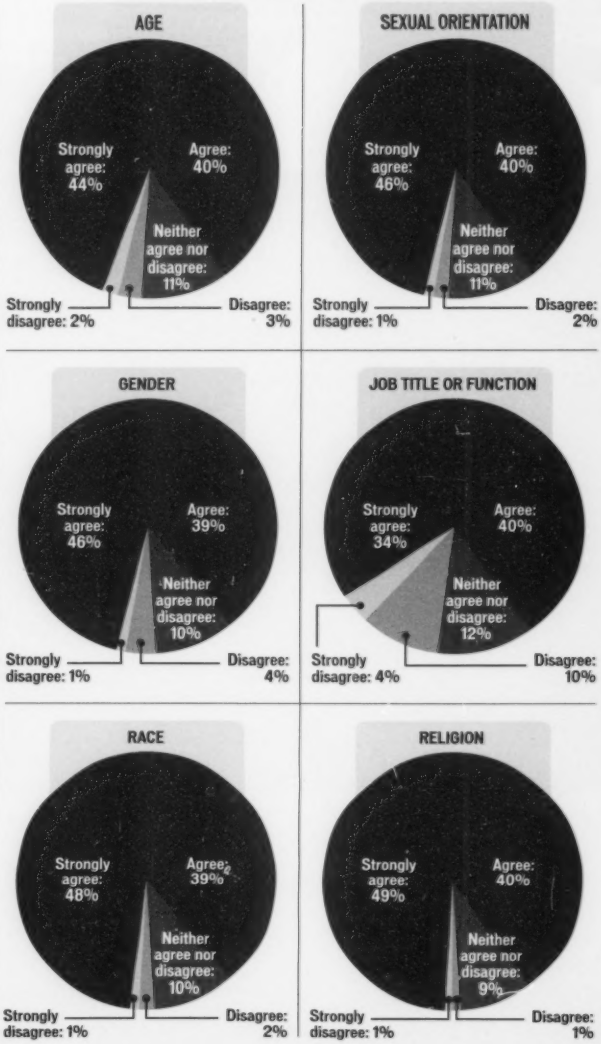
GRAINGER
FOR THE ONES WHO GET IT DONE

Management

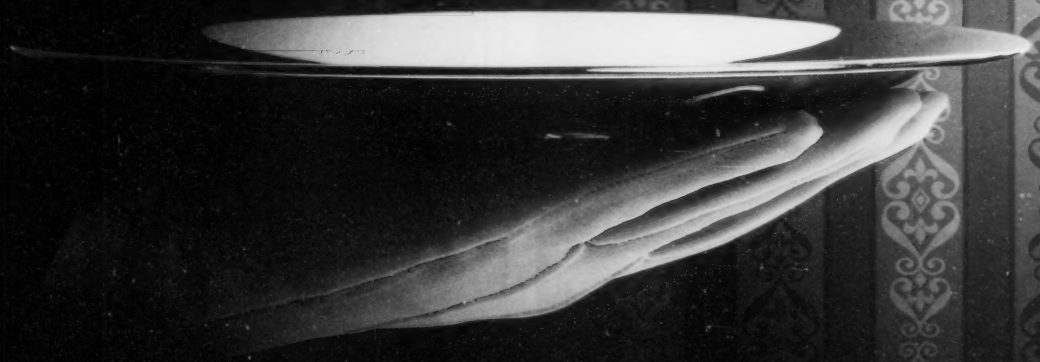
SOURCE: 27,036 IT EMPLOYEES FROM THE 100 BEST PLACES TO WORK IN IT 2007

Best Places managers fared well in employee evaluations. Eighty-three percent of respondents said management makes no distinction based on age, and 85% said management treats all employees fairly based on gender. However, a little more interest in career development would be an improvement, as would better communication. Sixty-three percent of employees said IT management is involved and interested in their career development, and 55% said IT management involves staffers in decisions that affect their jobs.

Management treats everyone fairly and equally regardless of . . .



Not getting the *service* you expected from your *applications provider?*



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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2007

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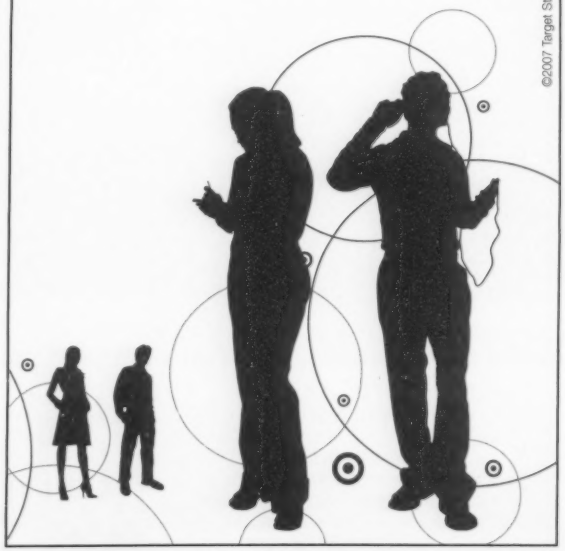

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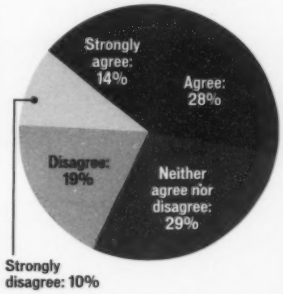
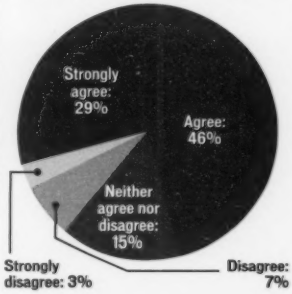
Management

SOURCE: 27,038 IT EMPLOYEES FROM THE 100 BEST PLACES TO WORK IN IT 2007

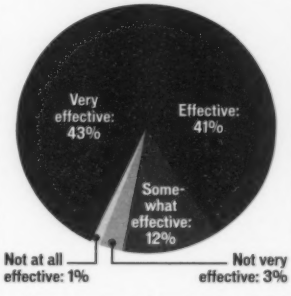
I feel I have a hand in running my company.



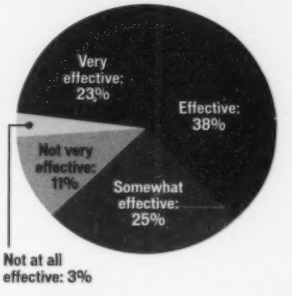
My company/ department has a clearly defined mission.



My company effectively communicates benefit information.



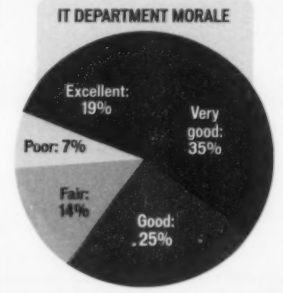
My company effectively communicates career opportunity information.



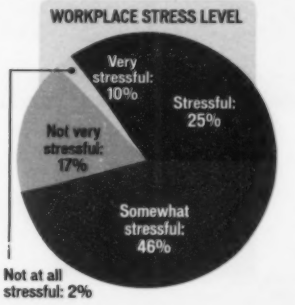
Pulse of the Department

Morale among employees at the Best Places is high – 19% rated their department's morale as excellent. But stress is high, too – 35% said they find their workplace stressful or very stressful.

IT DEPARTMENT MORALE



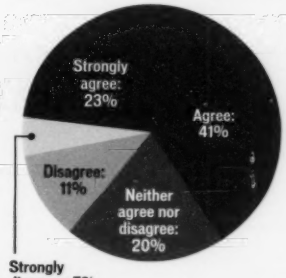
WORKPLACE STRESS LEVEL



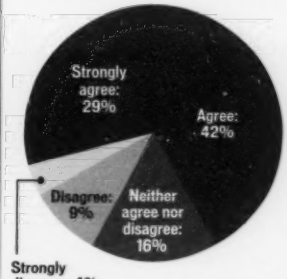
Management

SOURCE: 27,038 IT EMPLOYEES FROM THE 100 BEST PLACES TO WORK IN IT 2007

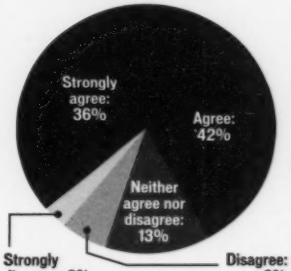
IT management is involved and interested in my career development.



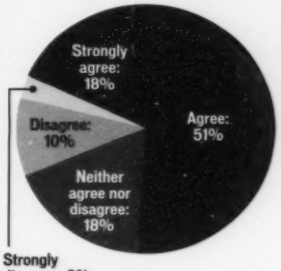
Management recognizes achievements and good work.



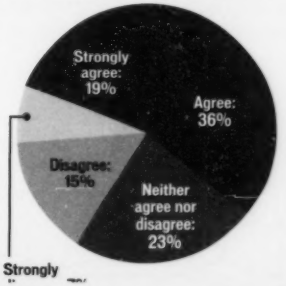
My company's corporate culture is positive.



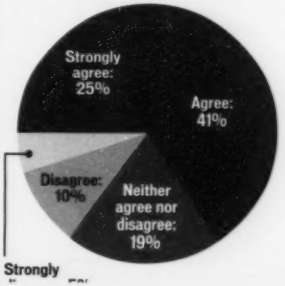
My workload is reasonable.



IT management involves the IT staff in decisions that affect their jobs.



IT management effectively leads the department.



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100 BEST PLACES TO WORK IN IT 2007

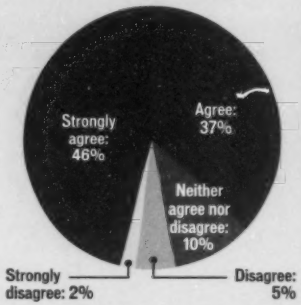
What Makes Them the Best?

SOURCE: 27,039 IT EMPLOYEES FROM THE 100 BEST PLACES TO WORK IN IT 2007

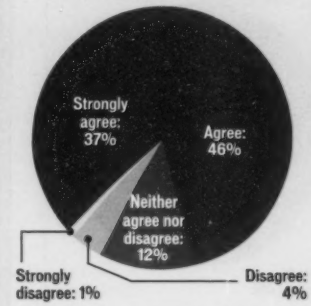
Most-Valued Benefits

- **75%** Paid vacation
- **68%** Health insurance
- **51%** Profit sharing/employee stock-ownership program/401(k)/403(b) plan
- **42%** Flexible hours
- **38%** Telecommuting
- **32%** Bonuses
- **27%** Reimbursement for technology certification
- **26%** Continuing education/executive programs
- **25%** Paternity/maternity leave
- **25%** Overtime pay/comp time for overtime hours worked
- **24%** College tuition reimbursement
- **18%** Domestic partner/spousal equivalent/same-sex partner benefits
- **17%** Paid or unpaid sabbaticals
- **16%** Employee assistance programs
- **14%** On-site fitness center or fitness membership reimbursement
- **10%** Child care
- **9%** Job sharing
- **7%** Elder care and/or services

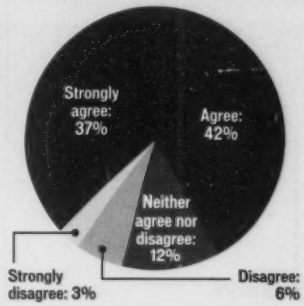
I am motivated to do my best.



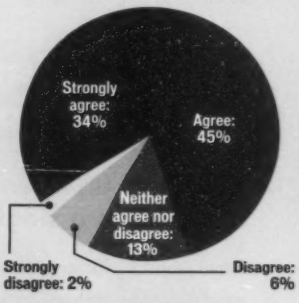
My job is interesting and challenging.



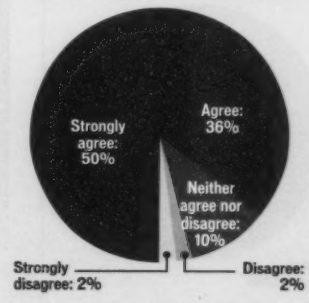
This is a team-oriented company/department.



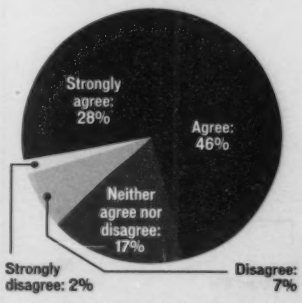
I have access to training and education to enhance my skills.



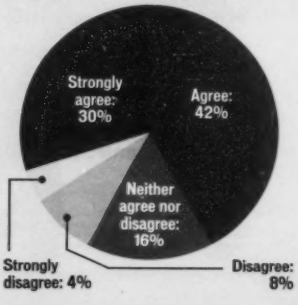
My company is run ethically and honestly.



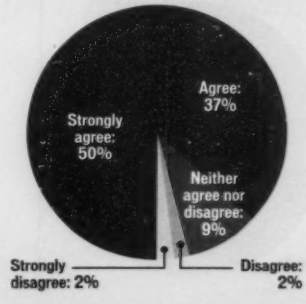
I have access to new technologies.



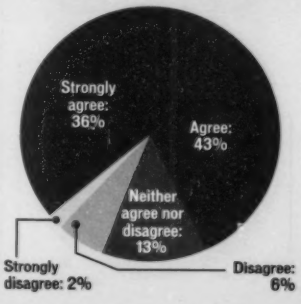
My performance is evaluated fairly and with adequate frequency.



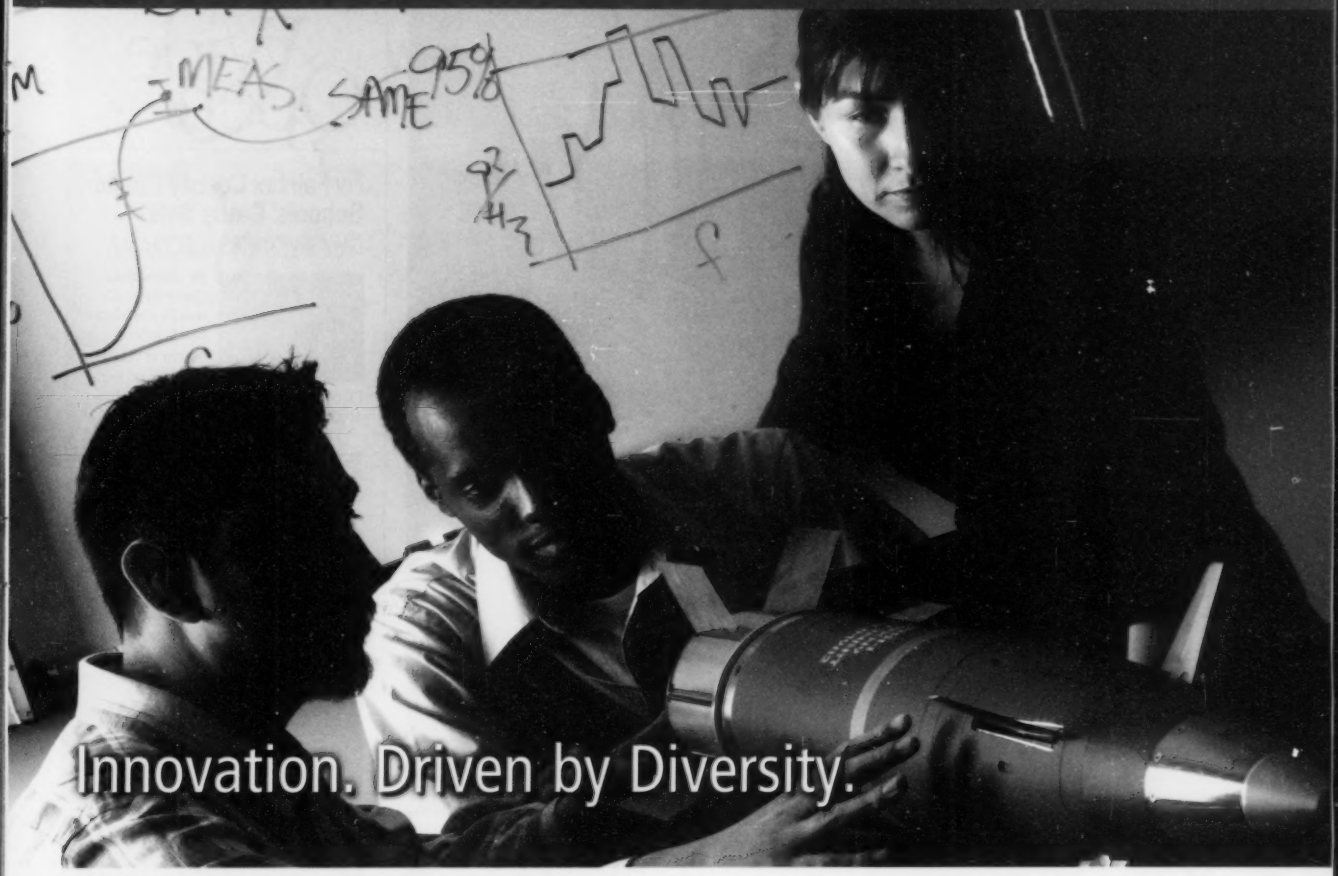
I have a good relationship with my supervisor.



I have the opportunity to get involved with interesting projects.



Raytheon People



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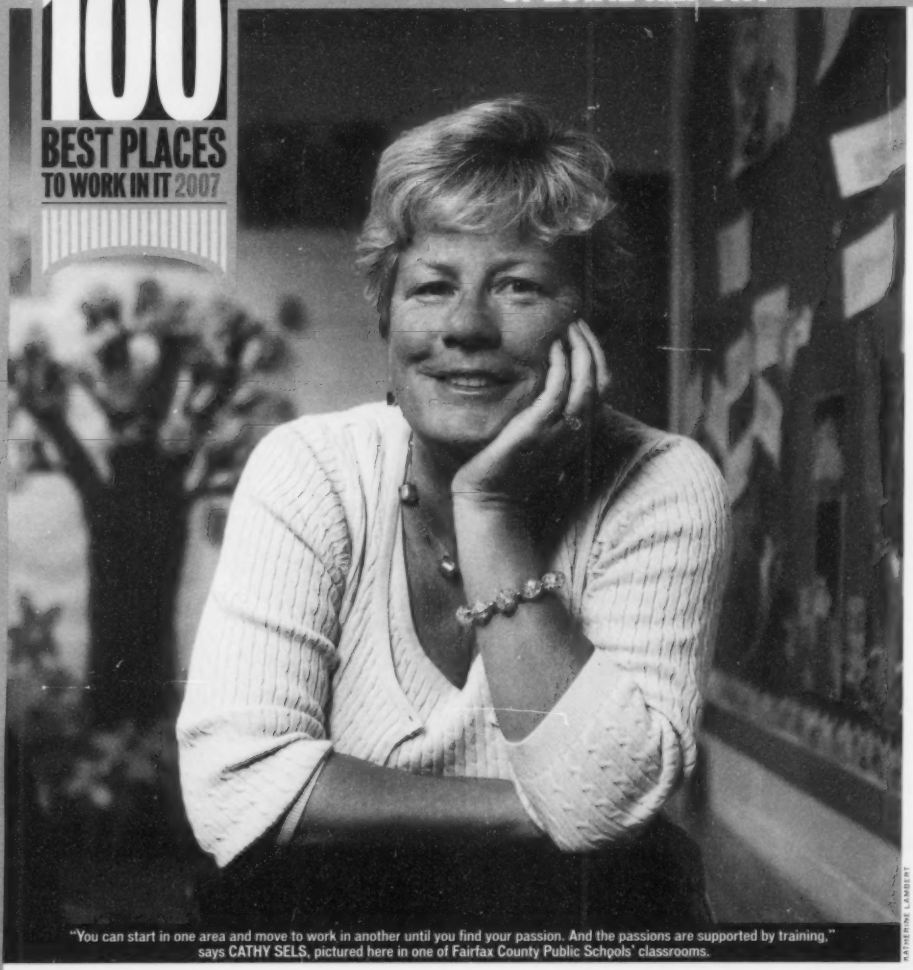
100 BEST PLACES TO WORK IN IT 2007



"You can start in one area and move to work in another until you find your passion. And the passions are supported by training," says CATHY SELS, pictured here in one of Fairfax County Public Schools' classrooms.

KATHERINE LAMBERT

Minds Wide Open

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Fairfax County Public Schools Ranked 5th for diversity • Ranked 10th overall

BY JULIA KING

Cathy Sels, 47, was in the Mexican fast-food business when she started her IT career as a parent volunteer in her son's kindergarten classroom.

"The schools were just starting to get technology, and my son's school was one of the first," she recalls. "They got computers but no funding for ongoing support or even to set up the computers." So Sels, who has a degree in business management and owns two Tippy's Taco House franchises with her husband, offered to figure out how to hook up the equipment and get things rolling.

Ten years later, she is director of IT

Continued on page 74

BEST PLACES FOR DIVERSITY

1 University of Miami
2 The Capital Group Cos.
3 Booz Allen Hamilton Inc.
4 Miami Dade College
5 Fairfax County Public Schools
6 Pricewaterhouse Coopers
7 Memorial Health Services
8 Harrah's Entertainment Inc.
9 Temple University
10 Southern California Edison Co.

To determine this top 10 list, we considered the following factors: Percentage of women and minorities in staff and managerial positions.

Their organizations try hard to keep them happy. And for these five IT staffers, it's working.

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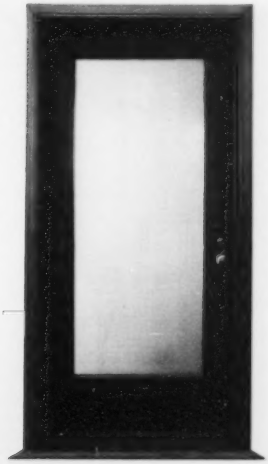

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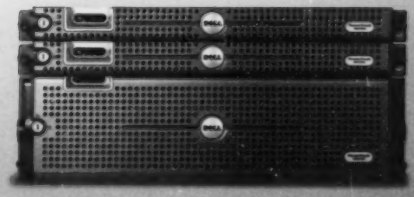

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"SAS managers keep track of my boredom scale, and they have always done well at finding new things for me to do," says **RUSS CARY**, shown near an SAS walking trail.

PAUL DAVIS

A Way to Unwind

SAS's Russ Cary enjoys the perks of overseas travel and a swanky fitness facility.

SAS Institute Inc. Ranked 2nd for benefits • Ranked 12th overall

BY GARY ANTHES

When Russ Cary, a senior IT manager at SAS Institute Inc., joined the Cary, N.C.-based software maker 24 years ago, there were 250 employees, and everyone knew one another by name. Now there are 10,000 workers at SAS in 522 offices around the world, and things are a bit different.

"But the part that hasn't changed is the challenge," says Cary, 48, who started at SAS as a data center operator while studying computer science at North Carolina State University. "I'm a technology geek, and I love a challenge, whether it's debugging something or new work. SAS managers keep track of my boredom scale, and they have always done well at finding new things for me to do."

It seems unlikely that Cary will suffer from boredom anytime soon. Here's what he and his staff of 27 oversee: wide-area networking worldwide; support for IT at overseas offices; global multimedia technologies; telecommunications worldwide, including VoIP; support for IT at research and development centers in China and India; and worldwide remote access to SAS.

Cary acknowledges that all these responsibilities bring considerable stress to the job. But, he says, "SAS does a good job of trying to cope with the stress by offering benefits like the gym, the day care center, the on-site health care and the freedom of flex hours." His staff has round-the-clock responsibility for global communications on a rotating basis and receives supplemental pay for being on call, Cary says. And he says he enjoys a great deal of freedom. "I have a pretty autonomous ability to do my job, to set the budget and choose the technology," Cary notes. "There's the freedom to explore, the freedom to be creative."

> **"SAS does a good job of trying to cope with the stress by offering benefits like the gym, the day care center, the on-site health care and the freedom of flex hours.**
>
> **RUSS CARY**, SENIOR IT MANAGER

SAS has had an international presence for years but has recently beefed up its overseas activities, Cary says. Just back from a month in India, he says he likes traveling abroad and enjoys supporting SAS activities outside the U.S.

"It's appealing to be able to work with new technology, and now we have the opportunity to do it globally," he explains. "How do you communicate globally? How do you solve performance issues globally? It's introduced a whole new world into the IT organization and kind of rejuvenated it. It's a lot of work and a lot of stress, but we feed off of that."

Asked what he likes best about working at SAS, Cary says, "It's the total package — the mentality of the company, the challenge of the work, the flexibility of the job."

BEST PLACES FOR BENEFITS

1	H. Lee Moffitt Cancer Center & Research Institute
2	**SAS Institute Inc.**
3	PricewaterhouseCoopers
4	University of Pennsylvania
5	Comerica Bank
6	Quicken Loans Inc.
7	Novartis Pharmaceuticals Corp.
8	Sharp HealthCare
9	General Mills Inc.
10	Aflac Inc.

To determine this top 10 list, we considered the following factors: A range of benefits, including sabbaticals, health and vision benefits (percentage paid for by the company) and long-term care.

Continued from page 72

operations for Fairfax County Public Schools (FCPS). In the years in between, she has helped to implement and support everything from audiovisual equipment, security alarms and public-address systems to the wired and wireless voice and data infrastructure and enterprise systems that serve 240 education and administrative sites.

In the mid-1990s, "lots of technology came in very quickly, and there was always an opportunity to come up with innovative ways to solve problems," Sels says. One of her earliest assignments as an instructor's aide was to set up a computer lab at an elementary school with 400 students who, collectively, spoke 26 different languages.

It was one of Sels' first experiences with the great diversity of colleagues, students, and career and training opportunities that place Fairfax County in a class all its own among this year's Best Places to Work. For instance, of a total IT staff of 449, 144 are women, and 130 are minorities. Ten of the school system's 21 IT managers are women, and 11 are minorities.

> **"We're diverse in our personnel, but we're also diverse in what we support.**
>
> **CATHY SELS**, DIRECTOR OF IT OPERATIONS

In working with the more than 160,000 students in the school system, "we can often come up against a language barrier, and there's always someone to help you through that," says Sels.

But it's the wide range of opportunities to learn new skills and work with different technologies and on multiple teams that Sels says is one of the best parts of working for the school system.

"We're diverse in our personnel, but we're also diverse in what we support," she says. If they want to, IT employees can transition from working on computers to networking, or from development to field services. "You can start in one area and move to work in another until you find your passion. And the passions are supported by training," Sels adds.

After her first paying IT job as an instructor's aide, Sels moved to FCPS's technology support group for two years. She also enrolled in night school, earning an MCSE certification. Sels moved again to fill an opening in FCPS's engineering group, learning the technology involved in the back end of the voice and data infrastructure. Next, she moved to field services, eventually working her way up to field services coordinator. From there, Sels went to network and systems services, where she was responsible for all wired and wireless networks. After two years, Sels was named to her current role as director of IT operations, which includes field services, network services, the data center and the network operations center.

"Cathy is an exemplary employee who has worked her way up through our organization," says FCPS CIO Maribeth Luftglass. "She is hard-working, a quick learner, and has strong communication skills. She has taken advantage of professional development and advancement opportunities and has consistently proven herself as an IT leader."

One of the best things about working at FCPS is that "your work speaks for itself," Sels says. "I've seen it over and over again. People come in and have ideas and want to move forward in a particular area, and then the opportunity to take a job in that area comes."

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"We're challenged to reach for the stars, so to speak, to think big," says Creighton University's MARK PANNING, pictured here near a building under construction on the university's campus. "I like the fact that I'm helping people and I'm learning [about new technology] at the same time."

MIKE MALONE

He's Here to Stay

Expanding opportunities make **Creighton's Mark Panning** happy to stick around.

Creighton University Ranked 4th for retention • Ranked 95th overall

BY MARY K. PRATT

Mark Panning wasn't planning for a long career at Creighton University when he moved to Omaha in 1991.

He expected to earn a master's degree in computer science at the nearby University of Nebraska and just happened upon a programmer job opening at Creighton.

Now, 16 years later, Panning has no plans to leave.

According to Vice President and CIO Brian A. Young, turnover during the past 12 months has been only 3.7% for a department of 120 permanent workers. Young credits his department's people-first philosophy for the low rate.

"We focus on people, leadership skills, where do they want to go and how do we help them get there," he says.

It helps, of course, that Young can offer his employees free tuition for two courses a semester plus the ability to audit as many courses as they want. But he says he supports workers who take classes outside the university, too, and finds resources to make it happen.

Young also encourages his workers to stay up to date with technology and assume more responsibilities to stay challenged in their jobs. He brings in a leadership coach four days a month for anyone on staff to meet with.

It's that kind of environment that has kept Panning at Creighton for so long. "It's about you the person rather than a number," he says. "We're challenged to reach for the stars, so to speak, to think big. If we have an idea, our ideas go all the way up to Brian, and to have your ideas heard, that makes a difference."

> **It's an exciting time, and it's great to be part of that.**
>
> **MARK PANNING,** PROGRAMMER AND TEAM LEAD/PROJECT MANAGER

BEST PLACES FOR RETENTION

1. National Rural Electric Cooperative Association
2. Commonwealth Financial Network
3. Quicken Loans Inc.
4. **Creighton University**
5. Edgewood Hospital and Medical Center
6. University of Miami
7. H. Lee Moffitt Cancer Center & Research Institute
8. The Reader's Digest Association Inc.
9. Information Control
10. Sharp HealthCare

To determine this top 10 list, we considered the following factors: Frequency of employee satisfaction surveys, turnover rate, promotions and corporate communication initiatives.

Panning has taken advantage of the department's policies and principles to develop new skills, advance his career and make his mark on the university as a whole. He has taken about 10 upper-level computer-related courses at Creighton for free.

He has also worked with the university's leadership coach to sharpen his skills for serving his business clients. And Panning and others received extensive training when Creighton moved from a mainframe system to a client/server, Oracle-based system in the late 1990s.

Panning started as a first-level programmer in the university relations department but has moved to a second-level programmer job that involves more complex designing. He's now a team lead/project manager supervising six programmers and overseeing a consulting team. Panning's area of responsibility has expanded with his new position, too, growing from just university relations to include human resources and payroll.

Panning sees more opportunities ahead and says that with building expansions and new directions for the university, "it's an exciting time, and it's great to be part of that."

He's not just going along for the ride. Panning says his ability to influence what's ahead is another reason why he has stayed. He serves on several committees, which allows him to explore new technologies to help university officials become more efficient in various areas.

"I like the fact that I'm helping people and I'm learning [about new technology] at the same time," he says. ▸

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

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"I never totally stopped going to school."

JILL BAKER, MANAGER OF GLOBAL FINANCE AND PROCUREMENT APPLICATIONS

A Well-Nurtured Career

Supervisory training helped **Corning's Jill Baker** become a better boss.

Corning Inc.
Ranked 4th for career development • Ranked 78th overall

BY THOMAS HOFFMAN

As a 25-year IT professional, Corning Inc.'s Jill Baker has attended numerous training programs. But perhaps the most profound leadership instruction she has received was from a two-day supervisory effectiveness course she took at the manufacturer's Corning, N.Y., campus in 2005.

"I don't think we listen enough to employees," says Baker, who has been manager of global finance and procurement applications at the specialty glass and ceramics maker for the past four years. "It's one of the things I walked away with and try to apply every day."

And apparently, she has. Later that same year, Baker received an award for effectively nurturing the growth and development of her fellow IT workers. "It's only given to one or two people a year, and [Baker] was too modest to bring it up," says Elizabeth Ebeling, a senior communications specialist at Corning.

"I had no idea I was going to get this [award]," says Baker. "It was a total surprise and quite an honor."

Perhaps it's not so surprising after all. Training alone doesn't make someone a good manager. Supervisors need a variety of traits to become effective leaders, including an ability to listen carefully and inspire others to achieve their goals.

Still, the quality of training that Baker has received has helped shape her into the IT leader she is today. In addition to PeopleSoft-related training she has received at Corning, Baker was coached by a more senior IT manager in the company's environmental technologies division about three years ago.

The mentoring program allows managers to seek advice about how to handle real-world situations, including the proper communication approach and tone to use with IT staffers in specific situations. "Understanding Corning's culture was truly a big influence," Baker says.

With the help of Corning's tuition reimbursement program, Baker was recently able to earn a bachelor's degree in business administration with a specialty in MIS from Elmira College in Elmira, N.Y. After obtaining her

Continued on page 80

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Continued from page 78

associate's degree in 1981, Baker got married and started a family, but she has been taking college classes periodically for the past 25 years. "I never totally stopped going to school," says Baker, whose son also just received his bachelor's degree. "It's been tough."

Baker's work has taken her to China, Japan, Germany and the U.K. To prepare for those trips, she has taken courses that offer travel tips, including do's and don'ts in certain countries.

"[The challenges of] traveling and dealing with other countries can't be overstated," says Baker. "It takes practice, and your skills grow over time. It's something I've had to stretch myself to do, but it's probably been the biggest area of development for me since I've been here."

Baker has also taken a slew of project management classes during her seven-year tenure at Corning. The company hosts project management courses offered by Arlington, Va.-based ESI International Inc. "Some of the skills you learn are about managing people to a plan, removing obstacles and issues, and dealing with communications," says Baker, who earned a master's certification in project management from ESI. "I found that this training has been a great influence for the environment that I'm in now."

Baker's education will continue this fall when she takes a weeklong Corning-sponsored course called Dimensions of Leadership. The course, which is given by Corning and external instructors to roughly 15 managers at a time, mixes role-playing and lectures.

Says Baker, "I want to continue to grow as a manager and in my effectiveness as a manager."

BEST PLACES FOR CAREER DEVELOPMENT

1. Comerica Bank
2. Paychex Inc.
3. Apollo Group Inc.
4. **Corning Inc.**
5. The Schwan Food Co.
6. Commonwealth Financial Network
7. National Rural Electric Cooperative Association
8. The Reader's Digest Association Inc.
9. University of Miami
10. General Mills Inc.

To determine this top 10 list, we considered the following factors: Mentoring programs and tuition reimbursements for college classes and technical certifications.

An 'A' Student

Commonwealth Financial's Keri Donahue took classes to move from HR to the Web.

Commonwealth Financial Network Ranked 1st for training • Ranked 78th overall

BY THOMAS HOFFMAN

After spending the first five years of her career as a human resources manager at Commonwealth Financial Network, Keri Donahue started getting antsy for a new challenge. So five years ago, when IT executives at the Waltham, Mass.-based broker/dealer asked Donahue if she'd be willing to spend part of her time helping to implement a content management system, she leaped at the chance.

A few months later, Donahue was offered a full-time position as a Web site specialist. She hasn't looked back since.

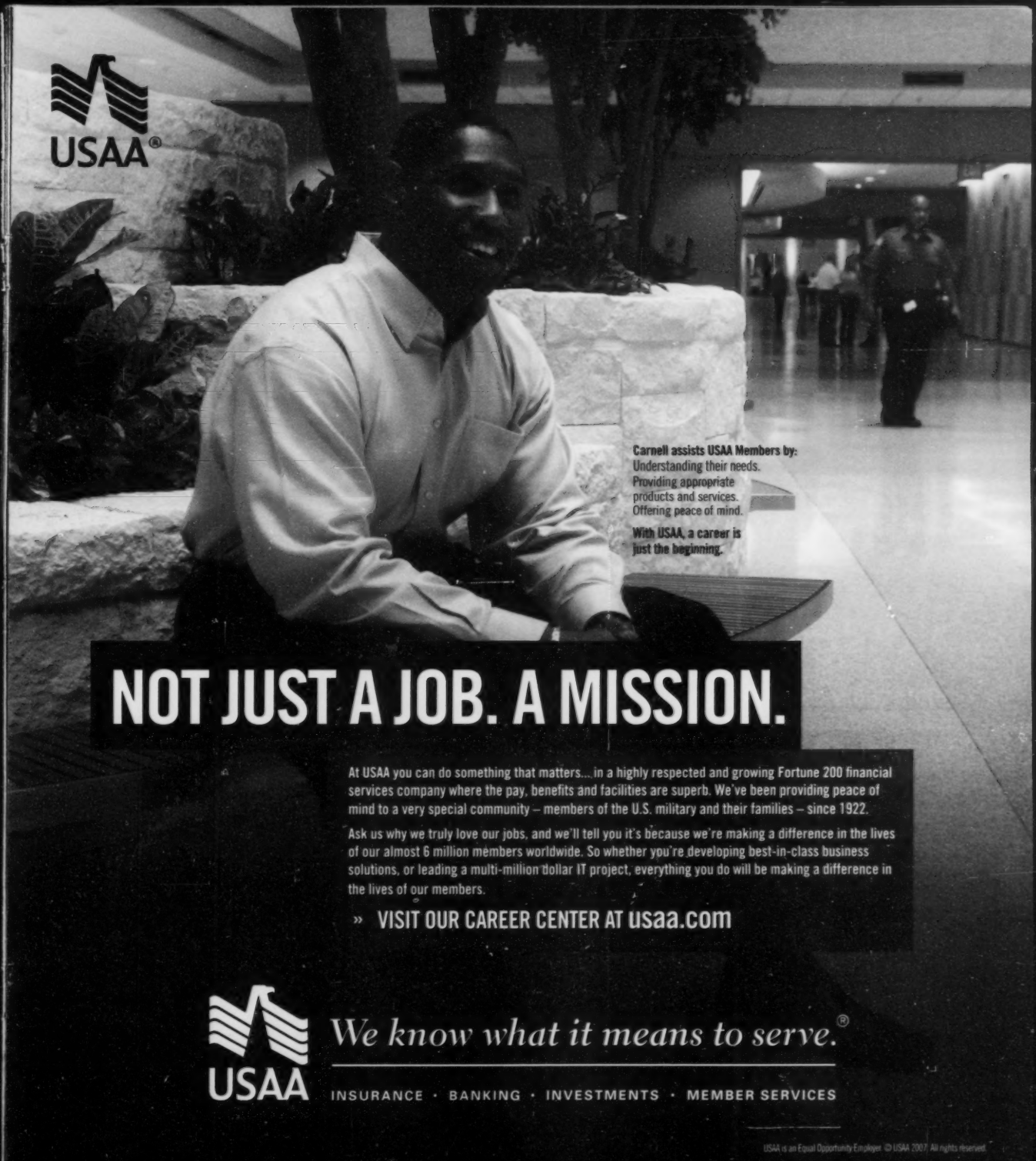
Donahue didn't have any prior technical experience other than having taken a few introductory IT courses at nearby Bentley College during her undergraduate studies. So she started her budding career in IT by cutting and pasting content into a system that feeds Commonwealth's Web site. In her early days in IT, Donahue received on-the-job HTML mentoring and took a few HTML courses on Commonwealth's dime at New Horizons Computer Learning Centers.

These would mark the first steps in a five-year journey that led Donahue, 32, to receive considerably more training, which has helped make her a more effective IT worker — and a better-paid one, too.

Donahue has learned a lot about HTML, Photoshop and JavaScript on the job, primarily by tapping the knowledge of more experienced peers. "Commonwealth is great in that you can go to anyone and ask them questions," she says.

Three years ago, after Donahue had begun learning more about Web site usability and demonstrating more interest in that area, her boss gave her a list of classes to consider. After attending a series of two- and three-day courses offered by Human

Continued on page 84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See Frank Abagnale

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See V. James Onalfo

As CIO and Deputy Commissioner of the NYPD, Jim has received six awards for the Real Time Crime Center, including the Top Government Global award. Jim accepted the Computerworld Honors Program's 21st Century Achievement Award in 2006, and was recently recognized as one of Computerworld's Premier 100 IT Leaders for 2007.

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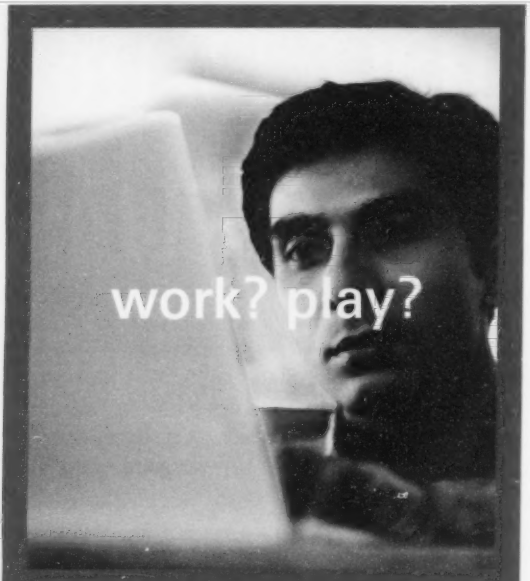

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Continued from page 80

Factors International Inc. in Boston, Chicago and New York, she took an online exam in March and received a Web site usability analyst certification. The certification helped her land a promotion, she says.

Donahue says the off-site training has also helped her to better understand how people use Web sites and online applications and to determine the types of features and functions users want.

As an investment broker/dealer, Commonwealth develops many of its own proprietary products, such as online financial wizards for more than 1,000 customers who are independent financial professionals, plus applications that those representatives can use to pull all of their customers' information into a single view, Donahue explains.

To help her comprehend the needs of Commonwealth's internal and external customers, she has also taken introductory classes on mutual funds and cash management.

"In developing our Web site, it's important for me to understand mutual funds," says Donahue. "So when someone comes to me and says they'd like to add this piece here or change the look of this area, it's important that I have an understanding of what it all means and how best to display it on our site."

The classroom training Donahue has received has also helped her grasp the contextual nature of Web design. For instance, one of the courses she took focused on research and helped her discover why it's a graphical no-no to place red text on a blue background.

"It has something to do with your eyes — it's a physical thing" in terms of how the brain interprets the colors and contrasts, Donahue explains. "I was picking these kinds of things up from my boss, but now it has new meaning behind it."

Overall, Commonwealth provides its IT workers with an "unbelievable" amount of training, says Donahue. "I think I could take a class once a week and not hit every one until after six or seven months," she says. Plus, it's not a static environment. "We're constantly evaluating and improving the classes — what works and what doesn't," she says.

The training has also helped Donahue and her peers gain additional respect from end users. Says Donahue, "We have this credibility we've developed through all of this training."

BEST PLACES FOR TRAINING

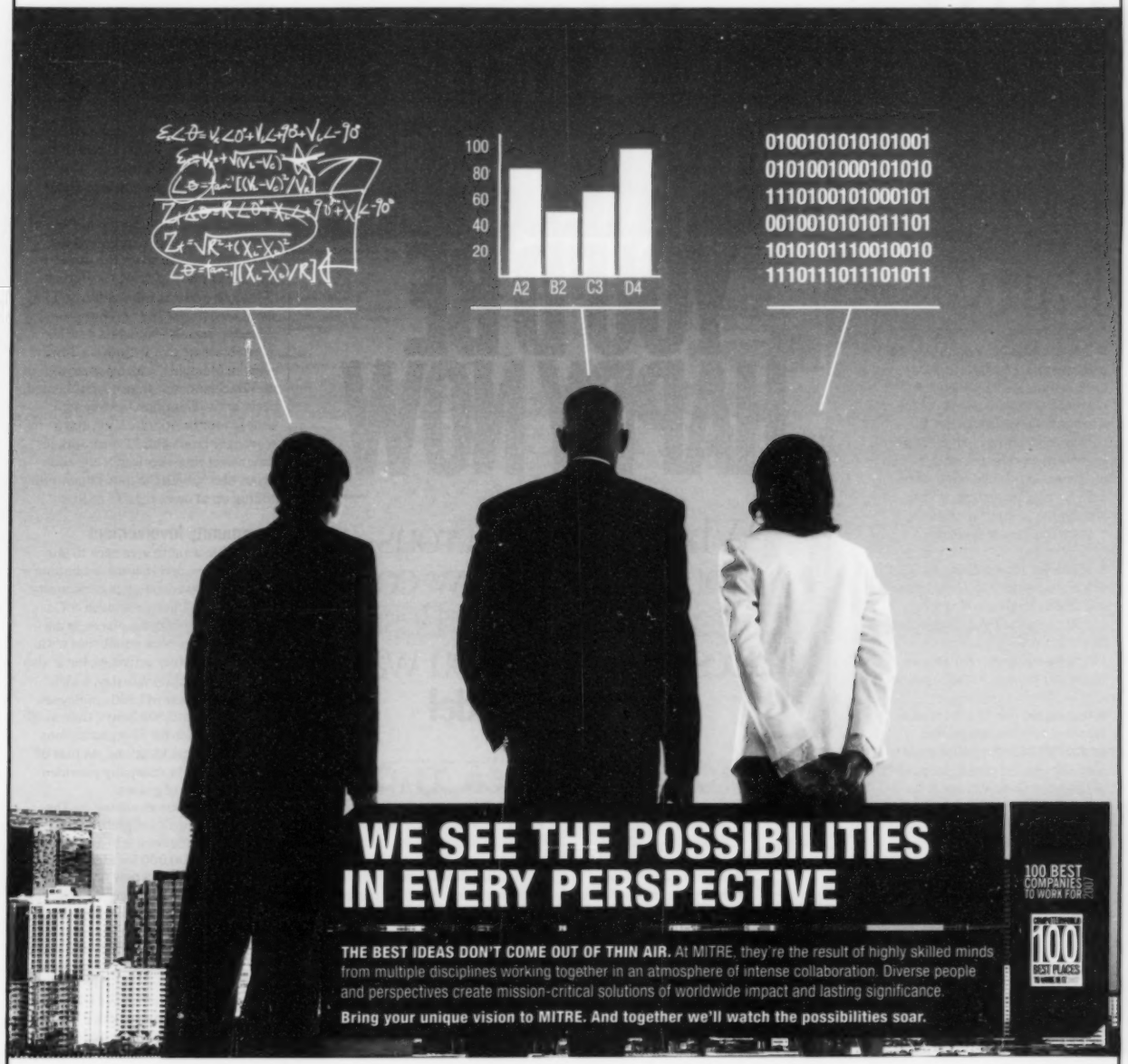
1	Commonwealth Financial Network
2	National Rural Electric Cooperative Association
3	The Mitre Corp.
4	The Capital Group Cos.
5	Informatica Corp.
6	Verizon Wireless
7	Creighton University
8	University of Miami
9	BAE Systems Inc.
10	Security Financial Group Inc.

To determine this top 10 list, we considered the following factors: Average number of training days and average cost of training per IT worker per year.

"We have this credibility we've developed through all of this training."

KERI DONAHUE, WEB SITE AND USABILITY SPECIALIST

MITRE



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100 BEST COMPANIES TO WORK FOR 2007

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100 BEST PLACES TO WORK IN IT 2007

IF YOU WORKED HERE, YOU'D BE HAPPY NOW

Whether it's generous vacation time or low-cost health care, these Best Places have what you want.

By Mary Brandel

SOME OF US work at great companies, and some of us can only drool. If you fall into the latter category, it's always good to know how the other half lives, especially when the hiring market is so hot that it's tempting to start a job search.

For instance, if vacation time is what you're after, try Discover Financial Services LLC (No. 45), which offers new hires 25 days of paid time off to use at their discretion instead of designated sick, personal and vacation time. Or there's The Reader's Digest Association Inc. (No. 91), which offers 21 days of vacation after just one year of service, as does Grant Thornton LLP (No. 15).

Is health care your driving concern? At Cerner Corp. (No. 59), which designs clinical information systems for health care organizations, you could take advantage of a newly built on-site primary care clinic that serves Cerner associates and their dependents. It provides primary care, laboratory and pharmacy services — many at no cost. In the clinic's first nine months of operation, over 27% of the company's Kansas City, Mo.-based employees and their dependents used its services, filing 10,779 pharmacy prescriptions and visiting the clinic 4,620 times.

Part-time workers who need health care benefits could consider Reader's Digest, which offers health care to anyone working at least 14 hours per week. United Parcel Service Inc. (No. 84) is also generous to part-time workers, offering health care benefits for employees working just 15 hours per week, and Corning Inc. (No. 78) draws the line at 16 hours per week.

Couples planning to start a family might look at Comerica Bank (No. 33), which offers 12-week paternity leave at full pay, or USinternetworking Inc. (No. 38), which offers seven weeks of full-pay paternity leave.

If your priorities are training and professional development, Harrah's Entertainment Inc. (No. 56) is a company to consider. In 2006, IT employees underwent an average of 65 hours of training, which amounts to about $3,500 per employee.

Harrah's also knows how to show appreciation for the successful completion of large projects. The company has famously completed six acquisitions in about the same number of years, placing the burden of smooth systems integration on IT's shoulders. At the end of those grueling projects, Harrah's launched a series of celebrations that included a dinner event in Memphis, with a private tour of the Graceland mansion; a luau-themed party at the Flamingo Las Vegas; a winery tour in Atlantic City; and a scavenger hunt at all IT locations, at which everyone received a one-time bonus check, with the total bonus outlay adding up to more than $5 million.

Community Involvement

Some of us want to give back to our communities, and that means finding a company that encourages community involvement. Charles Schwab & Co. (No. 53) is one of those places. It not only works to match employees with relevant volunteer activities, but it also hosts an annual service day, which resulted last year in 1,300 employees donating about 5,300 hours' time in 49 service projects for 53 organizations in nine different locations. As part of the program, the company provided $54,000 worth of grants.

For the innovators among us, Discover offers an award program in which employees can win anywhere from $100 to $10,000 for identifying an opportunity for a new or improved product, service or process. In the past eight years, the company has paid out more than $1 million for innovations that have resulted in over $7 million in cost savings or sales gains. The adoption rate of employee submissions is 16%, and 11 employees have won the maximum prize. As an added bonus, Discover pays local, state and federal taxes on all awards.

So take your pick among the 100 Best Places to Work and partake of some of the best benefits in the IT profession. It would be hard to go wrong. ▸

Brandel is a Computerworld *contributing writer. Contact her at marybrandel@verizon.net.*

Perk Party

■ Last year, **Aflac Inc.** (No. 22) launched a program called Energize to Socialize that is designed to bring together new IT hires and their families, as well as current employees, in various social clubs. The clubs represent interests such as film, family and home entertainment, sports, nature and the outdoors, arts and crafts, nightlife, fine arts, travel, chess and weight loss. Approximately 75% of IT employees have been involved in one or more clubs.

■ At **Charles Schwab & Co.** (No. 53), eligible employees can apply for a 28-day paid sabbatical, to be used for personal or professional development (including, for example, community service, career reflection or education). Employees are eligible after five years of full-time service.

■ **Corning Inc.** (No. 78) offers employees a five-year anniversary vacation. On every fifth anniversary with the company, employees are given an additional two weeks of paid vacation time to be used during that year. Some recent examples of how employees used this time include a cross-country drive, cruises and travel abroad.

■ When IT employees at **Harrah's Entertainment Inc.** (No. 56) are stressed, they have several ways to relax, including the complimentary ice-cream truck that stops by on hot days, drawings for prizes like PlayStation Portables, and break rooms complete with wireless service, plasma TVs, music and Xbox machines.

■ **L.L. Bean Inc.** (No. 55) employees receive a 40% discount on the company's active gear, discounts of one-third off the price of other full-price merchandise and a 25% discount on goods that are permanently marked down in Bean's retail and outlet stores. Employees can also borrow a wide variety of gear such as tents, backpacks, boats and snowshoes.

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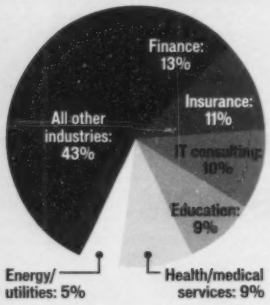
100 BEST PLACES TO WORK IN IT 2007

Where are they?

North Central	34
South Atlantic	23
Mid-Atlantic	20
Pacific	9
New England	6
South Central	6
Mountain	2

What do they do?



Merger Mania

32% have merged with or acquired companies, or divested business units, since Jan. 1, 2006

14% have an acquisition, merger or divestiture now pending

SOURCE: 100 BEST PLACES TO WORK IN IT 2007 COMPANY SURVEYS

KATHERINE SPENCER LEE

GET IMAGE-CONSCIOUS

THE COMPETITION for skilled IT professionals, already intense, is set to get fierce. Just look at the companies on this year's **Best Places to Work in IT** list: 64% said they plan to increase their U.S.-based IT staffs this year, by 7% on average. And more than one in six (17%) of more than 1,400 CIOs surveyed for the quarterly Robert Half Technology IT Hiring Index and Skills Report said they plan to add full-time IT staffers in this year's third quarter, while only 2% said they anticipate personnel reductions.

In the current competitive landscape, smart businesses recognize that to recruit and retain the best IT workers, they must go beyond standard compensation and benefits. A way to do that that's sometimes overlooked is to establish and maintain a strong organizational identity.

Businesses that have set themselves up as "employers of choice" — that is, companies whose names alone immediately evoke terms such as *innovative*, *prestigious* or *cutting-edge* — have a much easier time bringing top talent on board.

Workers who value those or similar attributes tend to think of these employers first when considering a career move. A positive reputation also helps maintain loyalty among existing employees, who enjoy the feeling of being envied by peers at other companies. Perhaps most important, efforts to reinforce company identity — when they're executed consistently and clearly — have a tendency to snowball, requiring less deliberate effort from above.

KATHERINE SPENCER LEE is executive director of Robert Half Technology (www.rht.com), a provider of IT professionals on a project and full-time basis.

For the vast majority of companies, it isn't easy to create and sustain an attractive workplace image, and it doesn't happen by simply stating that your company is a good place to work. Instead, promoting your organization's identity requires deliberate, overt efforts, as well as an adjustment of day-to-day management habits. Here are some things to keep in mind:

Keep it clear. Businesses often feel that there are many qualities that distinguish them from their peers. Your company, for example, might have an industry-leading compensation policy, allow IT professionals to work with the latest technologies and also maintain a start-up mentality. While all of these aspects of the company culture make your organization unique, it may be wise to keep your communication to current and prospective workers focused on just one or two key characteristics.

Walk the walk. Your company's image must be backed up by company practices. For example, if you want the organization to become known as a great place for IT professionals to advance their skills and careers, you must continue to invest in new training courses and methods, provide tuition reimbursement, offer flexible scheduling options to accommodate development opportunities, promote from within and so on. Consistency is key to building upon the identity your firm has established.

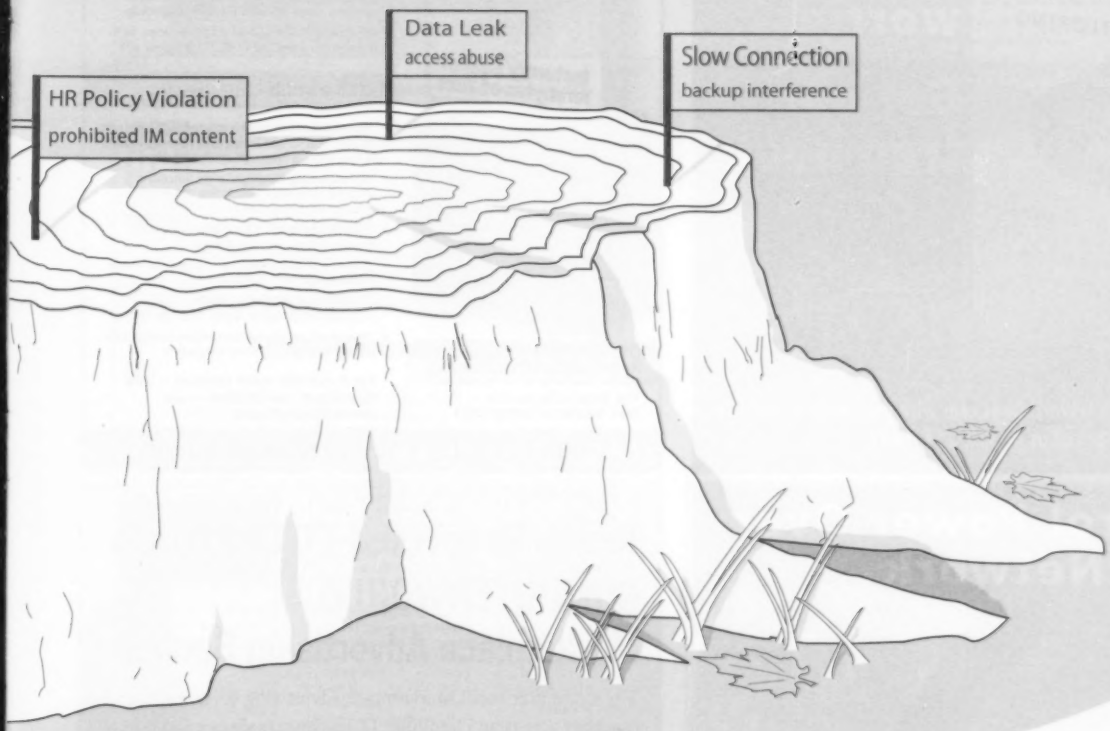
Link internal and external messages. Similarly, it's important to tie internal benefits to the company's external mission. In the previous example, the combined message might be, "Providing professional development to keep employees at the forefront of the industry helps us develop innovative products." By making this connection, you create a simple, coherent organizational identity that's more likely to have legs and resonate with workers.

Brag to others. Your communication effort around your organizational identity will be most effective if it is also aimed at the outside world. For example, your company may pride itself on its eco-friendly policies. Sponsoring a beach cleanup day or issuing a media statement when the company lowers its carbon footprint by a pre-established amount can help build a coherent corporate image that resonates with prospective employees.

Make sure the message is getting through. Efforts to communicate an image that doesn't match your workers' experiences with or perceptions of the company are bound to breed alienation, not pride. Say, for example, that your firm has many international locations and publicizes the fact that employees have the ability to explore new positions around the world. If most staff members see the openings as available to senior-level employees only, building an identity around your firm's global opportunities will do little to engender loyalty. So touch base with workers on occasion to ensure that the message you mean to send is clear.

IT professionals who clearly "get" the company message are more likely to spread that message among not only talented friends at other companies but also the new hires who are so important for your organization to retain.

Know your network roots.



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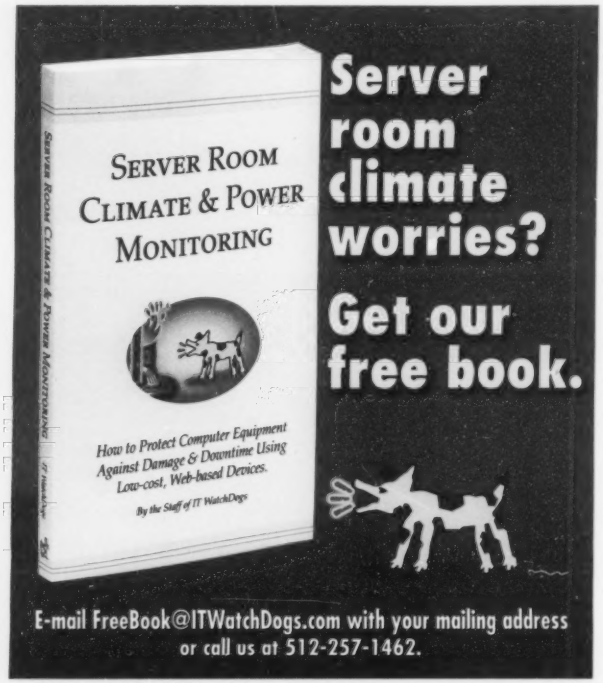
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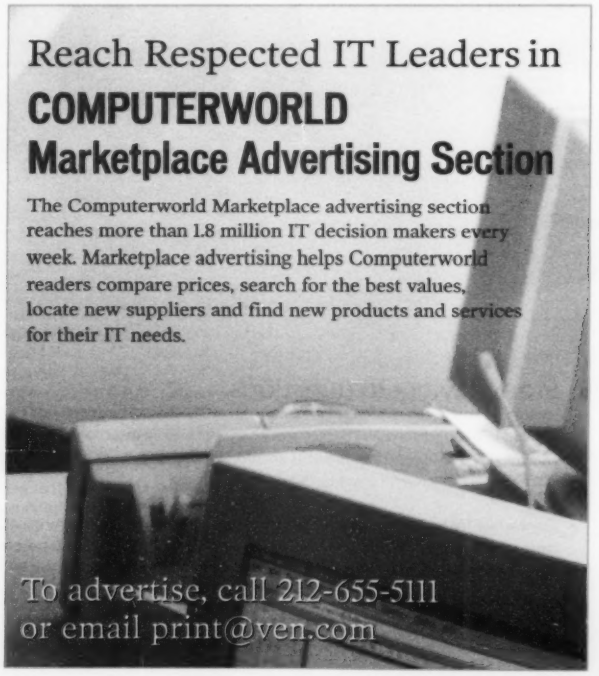
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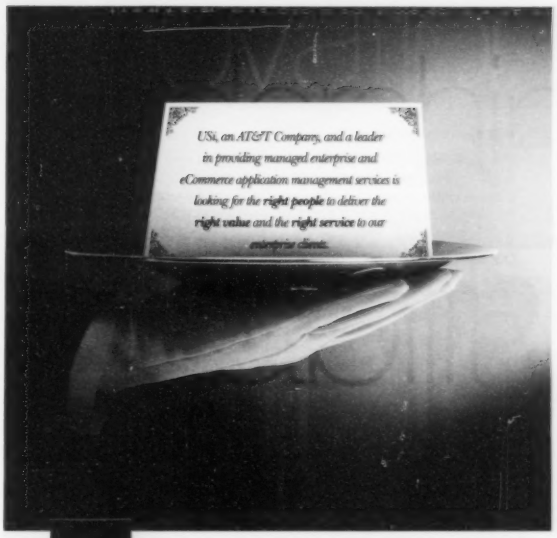
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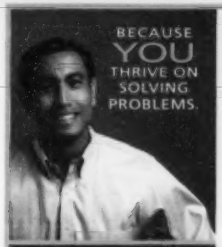

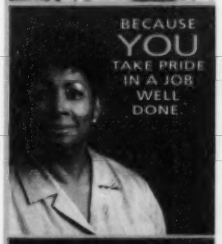

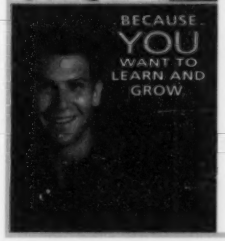

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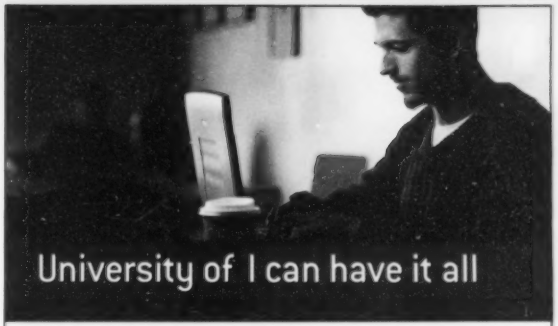

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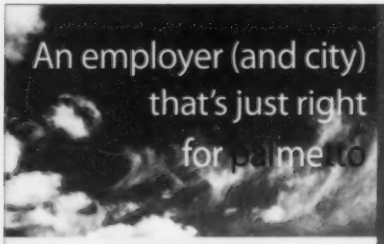

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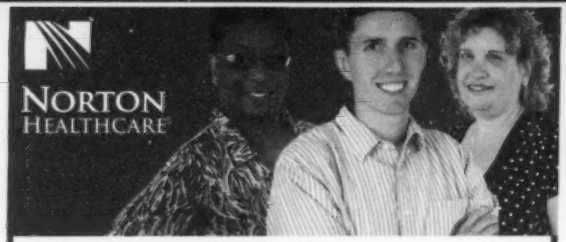

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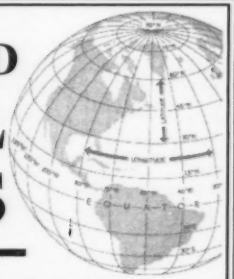

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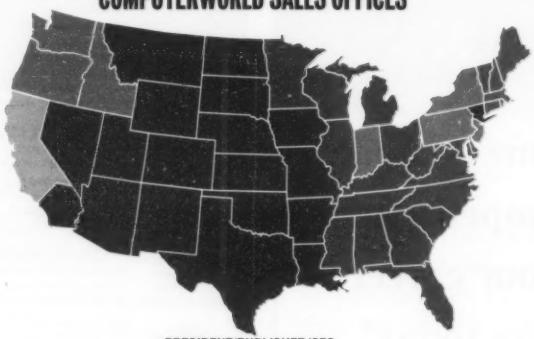

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Microsoft Looks to Stop Internal Server Sprawl

BY JOHANNA AMBROSIO

The profile of Microsoft Corp.'s in-house server farm is similar to those of many other companies: one application per server, with less than 20% peak server utilization on average. But **Devin Murray**, *Microsoft's group manager of utility services, is working to change that. Murray's team manages about 17,000 servers that support 40,000 of Microsoft's end users worldwide. In a recent interview with* Computerworld, *Murray detailed his efforts to boost server utilization rates via the liberal use of virtualization technology and a purchasing program he has dubbed "RightSizing." Excerpts follow:*

Q&A

What is your RightSizing plan all about? It's a utility concept, where our users focus on their business needs and we worry about the underlying hardware platform. The model is to get them to buy into this utility solution, and they don't have to worry about the hardware refresh — we worry about all that for them. And if they need more compute power, we get it to them. But we buy only what they need, not 600 times more capacity than they will use in two or three years.

Why are you doing this now? Back in 2005, we started looking at our compute utility. We started doing internal benchmarks — which business units are using what portions of their servers, how they rank among business units over time. It became apparent that we were buying machines that were way overpowered for our needs. So we started trying to change the conversation about purchasing — to help business owners understand their real needs and the options for meeting those real needs.

Like most customers, we don't want to pay for hardware we're not using. And it's only getting more pronounced — the current growth projections of AMD and Intel show sixfold server processing growth from 2005 through 2008. So as the servers get more and more powerful, we're using less and less of [that power].

How have your users responded? Businesses are very interested in how they're using the systems, and now they want more information. We're starting to scorecard a lot of our different IT services to show utilization and growth potential. We also scorecard ourselves from the perspective of an infrastructure and services provider: the percentage of servers moving to virtualization, how heavily the virtualized servers are being used, and so on.

What kind of progress have you made on the virtualization front? We've got about 1,000 production and 500 development applications running on around 70 hosts. Our goal is for all new applications to go into the virtual environment; we're not necessarily going back to existing or older applications to virtualize them all.

How are you selling the notion of using virtual servers to your business customers? We don't discourage businesses from trying. So if you like the idea but are worried about performance, we offer you the opportunity to test it for free. And we have a money-back guarantee. If you jump on board the virtual machine and don't like it, we give you your one-time on-boarding fee and any monthly fees back. We've had one customer do that.

Have you found applications that flat-out can't be virtualized – large SQL Server databases, for instance? Some that require specialized cards can't be virtualized today. As for the others, it's all about a performance envelope. Some of our Exchange workloads may not work in a low-end hosting space, but we don't exclude all Exchange workloads from being virtualization targets. ▸

Continued from page 1

HIPAA Audit

mont officials were presented with a list of 42 items that the agency wanted information on.

Among them were the hospital's policies and procedures on 24 security-related issues, including physical and logical access to systems and data, Internet usage, violations of internal security rules by employees, and logging of system activities. The 18 other items requested included IT and data security organizational charts and lists of the hospital's systems, software and employees.

Sending Shock Waves

The mere fact that an audit of HIPAA security compliance was conducted for the first time has many in the health care industry preparing for more enforcement actions, according to Barry Runyon, an analyst at Gartner Inc. "I don't think Piedmont was an anomaly," he said. "My sense is that there is going to be more feet on the street from HHS going on unannounced audits."

The security rules require organizations that handle health data to implement measures for controlling access to confidential medical information and protecting it against compromise and misuse.

Randy Yates, director of security at Memorial Hermann Healthcare System in Houston, said the Piedmont audit contributed in a big way to the approval of a $1.3 million budget item for data encryption during the medical service provider's next fiscal year.

"Everybody is aware of the Piedmont audit notification," Yates said. He added that after hearing about it, "we did our own gap analysis and found out where we are at highest risk for noncompliance, and we have since taken steps to shore up [those areas]."

As part of its efforts to bolster security, Memorial Hermann is also rolling out access management tools developed by Courion Corp. in Framingham, Mass. Yates said the software is expected to help the health care system set automated policies for controlling access to protected medical data by its 19,000 employees.

Also driving the increased focus on HIPAA compliance at Memorial Hermann is a directive issued last December by the federal Centers for Medicare & Medicaid Services (CMS), Yates said. The directive ordered entities that handle patient health information to implement stronger authentication mechanisms for limiting access to the data.

The fact that the audit appears to have been conducted by the HHS Office of the Inspector General (OIG) is puzzling, said Lisa Gallagher, director of privacy and security at the Healthcare Information and Management Systems Society in Chicago. She said most people in the health care industry had assumed that any security-related enforcement actions would be taken by the CMS, which administers the HIPAA security rules.

"Nobody really knows why the OIG did it or what's going to be their criteria for selecting the next one," Gallagher said. "There's a lot of buzz in the industry."

Chris Apgar, president of Apgar & Associates LLC, a Portland, Ore.-based consulting firm, said he thinks HHS decided to conduct the audit at least partly because it was getting political and media pressure to enforce the law. Apgar expects to see more audits in the future. But he said they're unlikely to occur very frequently, because the HHS simply doesn't have the required staffing resources.

Despite the industry buzz cited by Gallagher, Apgar said he's skeptical that the audit at Piedmont will spur many health care organizations to step up their efforts to comply with the security mandates.

"Until at least several audits have been completed and the industry sees action taken to enforce the HIPAA security rules, I think serious attention to compliance will not be a major focus," he said.

Officials at Piedmont didn't respond to a request for comment about the audit. An HHS spokesman said only that as a matter of general policy, the agency doesn't comment about ongoing audits. ▸

Drawing Data

According to an HHS document, the list of 42 items that the agency asked Piedmont Hospital to provide included the following:

POLICIES AND PROCEDURES FOR:

- Establishing and terminating user access to systems containing electronic medical records.
- Recording and examining user activities within such systems.
- Dealing with violations of internal security rules by employees.
- Managing the installation of software patches on systems.

OTHER REQUESTED ITEMS:

- A list of all systems containing protected health data.
- A list of all systems administrators and end users who have access to the data.
- Organizational charts with the names and titles of key IT and information security staffers.
- A list of all antivirus software installed on systems.

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Continued from page 1

Symantec

CTS, which has plants in Ohio and three other states, has 15 Windows 2003 servers along with Red Hat Linux-based hardware to run its ERP system.

The unified storage initiative, dubbed Storage United, was unveiled at Symantec's Vision user conference here last week. The plan aims to link Symantec's NetBackup data protection, Storage Foundation storage management tools and Enterprise Vault archive technology under a common set of services, Symantec officials said.

Data Center Multitasking

Having seen his storage swell from 1TB to 30TB in just four years, Vision attendee Kevin Donnellan said he hopes Storage United will work as planned.

"I definitely see the lines blurring" in the duties of the company's storage administrators, said Donnellan, assistant CIO for the Screen Actors Guild – Producers Pension and Health Plans in Burbank, Calif. "A good percentage of shops our size, 10 to 15 IT workers," must assign multiple duties to administrators.

"I have to cross-train my people because I can't afford to have a single-duty administrator anymore. The backup administrator is also the security administrator," remarked Donnellan. "You have to either wear multiple hats or know how to put them on at least."

Correction

In last week's cover story on contactless payment cards ("No Contact"), a survey of 800 consumers on the potential use of cellular phones to make mobile payments was mistakenly attributed to MasterCard Worldwide. The survey was conducted in March by Visa U.S.A. Inc.

The pension and health insurance arm for SAG union members has HP 9000 servers running Microsoft Windows 2003, Red Hat Linux and HP-UX. It uses Symantec's Managed Security Services for data protection and backs up core data using the vendor's Veritas NetBackup tools.

Symantec Chairman and CEO John Thompson said the Storage United services address multiple storage issues, including poor performance in heterogeneous operating system and hardware environments, fragmented departmental management of data center assets, and exploding data growth.

"IT organizations grew up through specialists' silos, and those silos created operational excellence. But as the infrastructure grew over time, they created operational complexity as well," Thompson said. The Storage United initiative aims to provide a horizontal management view of technologies within the data center, he said.

"I have to cross-train my people because I can't afford to have a single-duty administrator anymore. . . . You have to either wear multiple hats or know how to put them on at least.

KEVIN DONNELLAN, ASSISTANT CIO, SCREEN ACTORS GUILD – PRODUCERS PENSION AND HEALTH PLANS

Brian Rosario, vice president and support systems manager BankUnited Financial Corp. in Coral Gables, Fla., declined to talk specifically about the Storage United plan, but he did note that the need for IT personnel to be cross-trained is becoming urgent.

"I think there is real teeth in this initiative," said Lauren Whitehouse, an analyst at Enterprise Strategy Group Inc. in Milford, Mass. "End users have begun to increasingly demand integrated platforms. I don't think it will be hard to sell the concept to end users. Everyone gets the benefits of consolidation."

Dennis Martin, president of Demartek Inc., a research firm in Arvada, Colo., noted that integrating Symantec products should enable IT executives to better understand which of the vendor's offerings best meet their needs.

"There is a need to sort of identify all the things that are related to storage which people need to manage," said Martin. "It's not just backup and recovery anymore, but [also storage resource management and] de-duplication. There's a lot of things going on, and customers want to be able to say, 'These are the areas I'm looking for.' "

Martin added that the continuing trend of combining storage, server, hardware and software administration roles within data centers that are facing manpower or budget squeezes will further drive demand for shared capabilities across storage, networking and security technologies. ▸

NetBackup Update Boosts Performance, Security

LAS VEGAS

EARLY USERS of Symantec's revamped Veritas NetBackup software say its improved management capabilities and performance are solving problems that forced users of older versions to abandon the product.

Cupertino, Calif.-based Symantec unveiled Version 6.5 of the backup and recovery software during its Vision user conference here last week.

NetBackup 6.5 adds a host of capabilities – native disk-based backup, simplified data de-duplication, support for VMware virtualization, heterogeneous snapshot management and continuous data protection, the company said.

Kevin Donnellan, assistant CIO for the Screen Actors Guild - Producers Pension and Health Plans, said he expects the upgraded version of the tool to help corral the company's nightly 3TB to 5TB storage backups and 10TB to 12TB weekend backups.

In just four years, the insurer's storage capacity has grown from 1TB to 30TB on two storage-area networks (SAN), he noted.

Donnellan said his current configuration of dual backups – one in-house and another at an off-site storage firm – could use more firepower in the form of disk-to-disk capabilities, which he expects to be included in NetBackup 6.5.

The pension and insurance firm tested early releases of the new NetBackup software, which registered tenfold to fifteenfold performance improvements in disk-to-disk backups via a SAN compared with Version 6.0, Donnellan said.

"In 6.0," he added, "we have only one backup policy we can put together at one time, so all our servers have to live under the same policy. [NetBackup] 6.5 allows multiple backup policies, so you can rank the importance of your backups as opposed to a time stamp, which is very good for us."

The upgrades are too little, too late for organizations like the government of Pennsylvania's Dauphin County, which has offices in Harrisburg.

George Kuharic, manager of enterprise systems for Dauphin County, said he grew increasingly frustrated with NetBackup's performance early in the decade because it consistently caused problems during backups.

NetBackup might chug along and do 90% of a backup, and then we'd get a network error or something, and it would just kill the job.

GEORGE KUHARIC, MANAGER OF ENTERPRISE SYSTEMS, DAUPHIN COUNTY, PA.

"NetBackup might chug along and do 90% of a backup, and then we'd get a network error or something, and it would just kill the job," Kuharic said.

The county dumped NetBackup in favor of CommVault Systems Inc.'s Galaxy backup product last year, and the move has paid big dividends, said Kuharic.

"If I were talking to [Kuharic], I would say that we've gone leaps and bounds from where we were with NetBackup 4.5," said Peter Elliman, senior product marketing manager for NetBackup at Symantec.

NetBackup 6.5 is equipped with a new SAN client that lets storage administrators perform SAN backups to a disk pool, the company said.

Further, the upgraded backup tool can be married to Symantec's PureDisk de-duplication technology to minimize unnecessary file duplication and wasted storage space, Symantec officials noted.

NetBackup 6.5 also includes links to EMC Corp.'s VMware Consolidated Backup centralized backup facility to offload backups from the primary VMware server onto a secondary backup server, Symantec said.

Symantec noted that smaller VMware environments must use the company's PureDisk offering in a virtual machine instead of the NetBackup client.

– BRIAN FONSECA

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FRANK HAYES ■ FRANKLY SPEAKING

What Matters Most

WHAT MAKES an IT shop one of the Best Places to Work in IT? Great benefits? Fascinating work? A beautiful locale? Free cappuccino? This year, we don't have to guess. As part of our 2007 Best Places survey, *Computerworld* and IDG Research asked more than 27,000 IT professionals that very question.

Their answers are nothing short of amazing.

More people we surveyed (87%) agreed with this response than any other: "I have a good relationship with my supervisor."

That was followed closely by those (86%) who agreed with this response: "Our company is run ethically and honestly."

If you're not blown away by that, consider how these IT pros answered the question, "What's most important to you?" The most-agreed-to statement (95%): "I have a good relationship with my co-workers." Next most-agreed-to (86%): "I am proud to work for my company."

Good working relationships. Ethics and honesty. Pride. Those are the things that mark great IT workplaces above everything else.

They're more pervasive than job security or career growth or interesting work. Reasonable workloads? A clear mission for IT? Sure, those are often found in our Best Places to Work. But they're not at the top of the list.

It's true that a great place to work needs competitive pay. It needs a good benefits plan and opportunities for employees to grow in their knowledge and their careers. Parties and popcorn don't hurt, either.

But no increase in the payroll, benefits, training or free-food budgets can deliver what these IT people say is most important to them. You can't buy your way into being a great place to work. It's got to come from an organization's culture.

That's a truly stunning statement about our values in IT. Money is nice, technology is fun, careers are important. But above all, we care about people, about doing the right thing, and about being proud of what we do.

It doesn't stop there, though. These aren't just noble values. They're not just necessary pieces of a great IT workplace.

They're also critical elements for an IT shop to contribute to the success of the business.

Consider: When IT people have good relationships with their managers and co-workers, they communicate. They listen. They cooperate. They care about their own success, but they also care about the success of everyone on the team.

And as their circle of co-workers expands to include users on the business side — their partners in building business systems — they're more likely to care about the success of those users as well. Good relationships bring organizations together and focus everyone on success.

Consider: When IT people see ethical, honest behavior as a fundamental value of their organizations, that clears away huge amounts of uncertainty. Telling the truth and doing the right thing *become* the culture. The success of the business isn't tied to backstabbing, cheating and lying, but to competing hard and winning cleanly.

More than that, an honest company culture encourages honest employees who deliver their best work and aren't afraid to admit when something has gone wrong while there's still time to correct it.

And consider: When IT people are proud of their company, they'll make damned sure that their own work is something to be proud of, too. No slacking, no corner-cutting, no half efforts — it's not about doing just enough to get by; it's about doing great work that truly contributes to the success of the organization.

Good working relationships. Ethics and honesty. Pride. Maybe we really shouldn't be so amazed after all that these are the things most valued by IT people at the Best Places to Work.

They just happen to be the things that make for a best place to succeed with IT, too. ▸

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com.**

SHARK TANK

Work-arounds

This pilot fish is running network traces one evening to diagnose problems accessing e-mail, and he discovers that one user's workstation is generating a barrage of network traffic that's maxing out the server. "When I called the user, he finally confessed that to defeat the pesky screen-lock timeout foisted upon them by the security folks, he and his buddies would bring up the e-mail client, put a pipe cleaner around the F9 key to keep it stuck down, and *voilà*! – the screen wouldn't lock. That night, he forgot to unstick the key, so it ran all night. Unbeknownst to the user, the F9 key forces a rather server-intensive refresh operation. No wonder our e-mail servers have been bogged down lately!"

@#$%!

New user complains that the network has slowed his PC to a crawl – and on top of that, he says this sysadmin pilot fish is calling him names through the network! Fish fixes the performance problems remotely, then asks user why he thinks fish is insulting him. "Turns out that his autogenerated log-in was so many letters from his last name plus so many from his first name," says fish. "The generated name implied that his parents weren't married."

Hardware Fix

Programmer pilot fish's new PC keeps rebooting itself, and he can't identify what's causing it – until he realizes it only happens when he shifts his chair. "The case was on the floor under my desk, and the wheel spokes under my chair had a slight lip on them," says fish. "When I moved, the base of the chair would swivel, and a spoke would hit the reset button. Solution: I put the new computer on a piece of one-by-six board, raising the button just enough that the spoke wouldn't hit it."

Just What You Asked For

When new employees are hired at this manufacturing company, part of the paperwork includes choosing a password that's eight characters long and uses numbers and capital and lowercase letters. "We received a new hire's password that was six digits followed by two capital letters – the second of which was written a half-line lower than the rest," says an IT pilot fish. "When we contacted him about correcting it, he said it was the way he wanted it: six numbers followed by a capital letter and ending with one in lower case."

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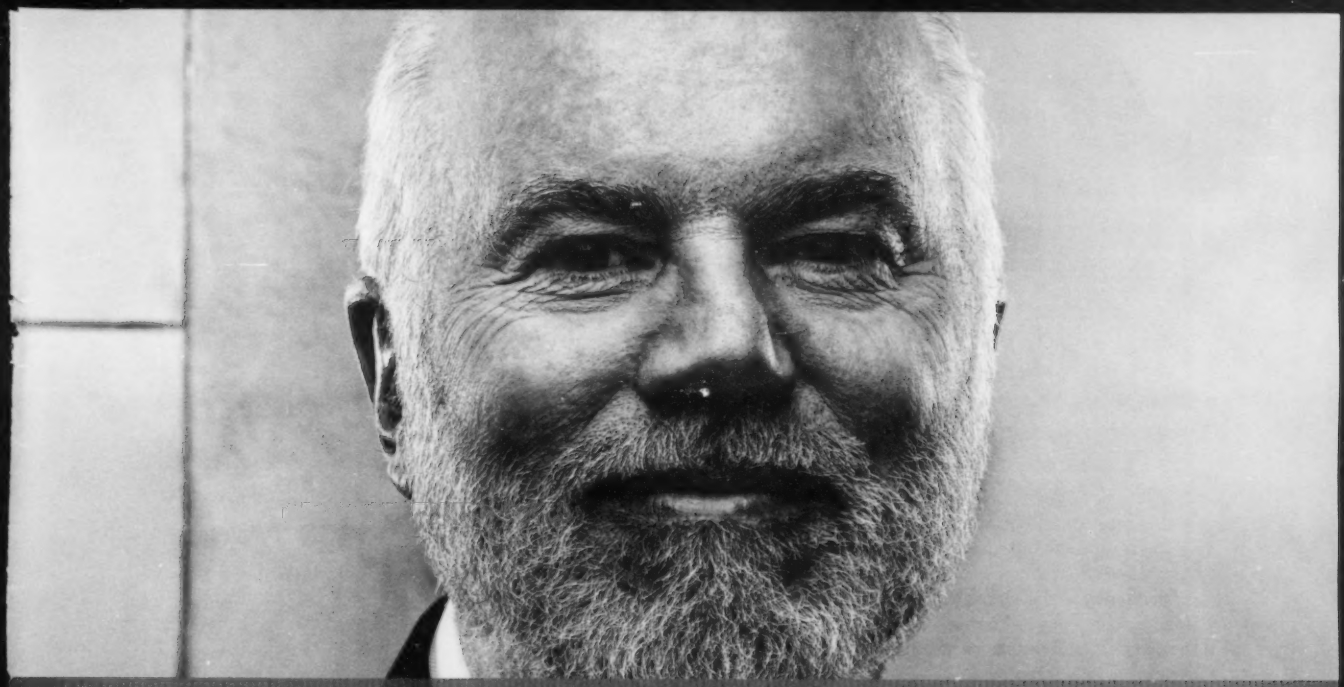

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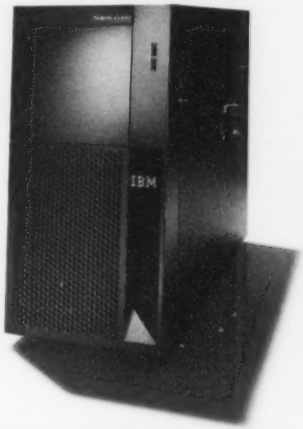

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